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ABSTRACT

A model for program planning in adult basic education is presented, the prototype having been produced by 40 coordinators, teachers, and adult learners. It was designed to meet the need, in adult education programs, for stabilization through systematic planning. A systems approach is defined with systems analysis, anasynthesis, and planning included as key concepts. Guidelines for narrative simulation and a 20-page sample narrative are given. One-third of the document is an explanation of the model which describes: the composition of the planning model; relationships and functions in detail; the type of information needed by planners who will use the model; important relationships which were indicated through the use of signal paths; actual use of the model; the planning process as used by teachers; and the planning process as used by administrators. A 20-item bibliography is listed. (SC)

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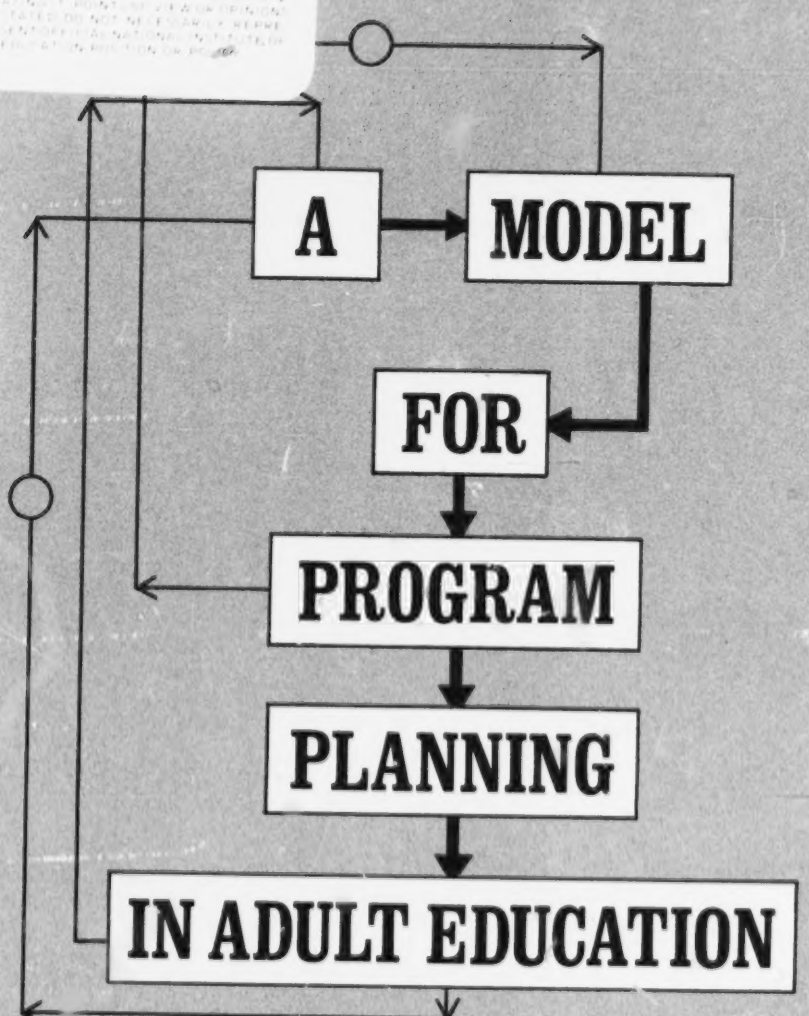

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A MODEL FOR PROGRAM PLANNING IN ADULT EDUCATION

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1973

This report was prepared pursuant to a grant received by the Southern Regional Education Board from the Office of Education, Department of Health, Education, and Welfare, under Section 309b of the Adult Education Act of 1966. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.

FOREWORD

Most programs in education could benefit from systematic, detailed planning. Region IV's experiences with staff development in adult education have shown that this is especially true of the adult basic education program, probably because much of its administration, instruction, and facilities lack traditions of their own, borrowing whatever they can from the public schools.

The largest number of people involved in adult basic education as teachers and coordinators are employed on a part-time basis, thus relegating their work with adults to secondary status and sharply curtailing the time available for preparation and planning. Several other conditions of employment detract from the security and attractiveness of work in adult basic education. Recruitment of learners is often an assigned responsibility; classes meet at night; learner attendance is erratic, and loss of enrolled learners is a constant threat to both ego and salary; funds are chiefly federal in origin and frequently late in commitment. Thus the program's greatest need, most adult educators would agree, is stabilization.

To meet this need in Georgia, this model was developed by a representative group of adult educators. In intensive work sessions, sponsored by West Georgia College, 40 coordinators, teachers, and adult learners produced the prototype. Through trial, it was refined by local coordinators during the following year and is presently being used with much success in several adult education programs in the state.

The model has become available at a very opportune time for Georgia. A new State Director of Adult Basic Education has been appointed and a recent reorganization of the Georgia Department of Education has placed adult basic education into the Division of Post-Secondary, Vocational-Technical, and Adult Programs. This model offers an opportunity for interrelating local and state program objectives and for strengthening these relationships through strenuous joint planning. Also, as a participant in the Region IV Adult Basic Education Staff Development Project, Georgia is involved in a cooperative effort to establish a dissemination capability within its staff development network. *A Model for Program Planning in Adult Education* provides a Georgia-developed product with which Georgia can begin the process of identifying and assigning the tasks, activities, and roles of dissemination to each of its staff development resources.

The need for program stabilization is not unique to Georgia. It is common to nearly all adult education programs. Because of this, Region IV's Adult Basic Education Staff Development Project, sponsored by the Southern Regional Education Board, is making this publication available to others. We feel that *A Model* is one way to provide adult education staff

with a process for stabilizing their programs through systematic planning. We invite other states and local programs to adapt this model, or any portion of it, to their own program planning needs.

EDWARD T. BROWN, *Director*
Adult Basic Education
State Development Project

ACKNOWLEDGMENTS

Since its inception this model has been used in states other than Georgia. Its users feel that it has a high degree of accuracy and universality. Planners can, with a minimum amount of effort, make adaptions of this model to suit their specific program needs and planning requirements. Over 4,000 manhours have been spent in its development and field use. The model is unique because of its degree of specificity and level of application as a state and local program planning process, and because of its easy adaptability to computer programing. It is my hope that continuous use will increase planning effectiveness of state and local adult education staff.

No acknowledgment is complete without mention of numerous personal debts. Southern Regional Education Board's Staff Development Project enabled me to conduct much needed research and to acquire supporting materials. It also provided unmatched contact with numerous adult educators at every professional level. The Unit of Adult Education of the Georgia Department of Education provided the interest, funds, and manpower necessary to prepare the prototype model. Although the Gribble-Spats program dared to be the first user of the model, mention needs to be made of those who used it as soon as they became aware of its potential. All of them offered invaluable assistance in revising and refining the model. Also, the model and explanation appear in slightly abridged form in the June 1973 issue of *Educational Technology;* I am indebted to the editors for the use of some of this material in the present document.

A special note of gratitude is due Len Silvern of Educational Training Consultants for reasons too multifarious to mention. My family awoke me at crucial moments. . .and then kept away from the lion's den so that this publication could reach completion.

Despite all of this aid and inspiration, full responsibility for omissions, poor humor, and any other preparation liabilities rests with me.

J. R. L.

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INTRODUCTION: ANASYNTHESIS

In recent years, we have seen a plethora of people using the expression *systems approach* for a variety of forms to such an extreme that conflicting definitions and usage have rendered the concept almost meaningless. Rau (1970) has developed the term *systems engineering* which has received some legitimization, but the usage of *education engineering,* ostensibly developed for the field of education, has returned us to the same state of confusion. An examination of several texts claiming to take a position on this issue reveals their not taking any position at all—a safe, if not useful, procedure. Several authors have published texts with such subtitles as *A Systems Approach,* which upon examination show little relation to systems analysis. Within the field of education we have a variety of systems approaches such as MBO, PERT, and PPBS. To further complicate matters, several distinctive languages and symbols have been borrowed from disparate planning approaches. To have any understanding at all, the neophyte or interested reader must not only understand approaches and strange language but must wade through unfamiliar symbols, and the unique usage of circles, triangles, and the like. Small wonder that the use of systems approaches by practitioners in the field has not rapidly caught on. What is needed (haven't we seen this expression before?) is a simple, understandable, readable, and usable systems approach with a concurrent amount of simplicity in language, symbols, and printed format.

This confusion has not generally taken place in adult education to date. Both Ryan (1970) and LaForest (1971) have employed a systems technique designed by Silvern (1972) called anasynthesis, which has had high applicability to adult education endeavors and has met the previously identified criteria. This approach has drawn a widening degree of acceptability among practitioners and users of the Ryan or LaForest models.

Silvern (1972) introduced the term *anasynthesis* to describe the usual sequence of the systems approach of analysis, synthesis, modeling, and simulation. In a recent publication, Silvern (1972) noted, "When anasynthesis is applied to training problems in a demanding manner, then anasynthesis and systems engineering are nearly synonymous."

The need for an exhaustive and workable planning model for adult educators has existed for some time. Some models have been developed but rarely with any specificity. Others did not provide for sequence, predictions, evaluation, or operational procedures. The ABE model which is discussed here was developed to meet these and other needs. Several advantages which it offers to the user are mentioned here:

1. It represents an exhaustive compilation of the planning and operational functions required of teachers and coordinators. The compilation itself was made by teachers and coordinators.
2. It offers a planning sequence of events that will enable systematic planning and predictability.
3. It does not use complex symbols, forms, numeric codes or procedures.
4. It has been field tested and proven workable.
5. It can be used to consistently and continuously evaluate specific aspects of programs.
6. It is a process by which simulation tryouts can be made to avoid costly expenditures.
7. It serves as a means for gathering, analyzing, and storing information needed for making planning decisions.
8. It is adaptable to computer program methods with a minimum of effort.

THEORY: A SYSTEMS APPROACH

There are three key concepts permeating this systems approach: systems analysis,[1] anasynthesis, and planning.[2] Each has established specific criteria, approaches, and applications. These concepts have one important goal in common: a desire to accomplish systematic and comprehensive longitudinal planning.

Hartley (1968) bests describes the situation in this way: "A major weakness of present school planning is the relatively little attention given to strategic, or long-term planning. Although most school districts make pupil projections as well as building and capital-facility estimates, active teacher involvement in planning and future resource allocation is modest, at best." This appears to have been the case in Georgia's program of adult and ABE[3] programs. Campbell and Sroufe (1967), in their study of planning activities in state departments of education, found that these departments are "inadequately staffed to perform planning activities. Most chief state school officers have little staff help that is not committed to the direction of ongoing activities. Traditional programs go unevaluated, little attention is given to possible new programs, and the agenda of departments grow according to the pressures and opportunities of the moment." The authors concluded that, when state departments have established planning and development positions, "little evidence can be mustered to support a contention that developmental activities are now performed by state departments of education. Our experience has been that even when a position for planning and development is created and filled on close examination little planning results. Nearly always state departments of education move from project to project with little design."

Their solution stated that "persons who can serve as planning and development staff to chief state school officers, must be recruited and allowed to perform that function. Such persons must be skilled in new areas such as systems management rather than merely reflecting experience in school administration." It was only in October 1972 that such a position was established for the adult education program in Georgia, but this did not solve the immediate problem of providing a planning process that could be employed at the local level. The main problem for the ABE program in Georgia is to develop planning capabilities among field personnel. Since over 95% of the people in the program work parttime, a planning process must be one that is operable within such a constraint.

The late director of adult education in Georgia, Katherine Kirkland, discussed this lack of a systematic and easily understood planning process with the author in the Fall of 1970. An attempt to fill this need revealed several complicating factors: (1) a cadre of parttime employees unskilled in

systems analysis; (2) a plethora of approaches, techniques and languages; (3) staff limitations; and (4) low motivation to produce such an approach. It was decided that inservice training would have to precede such an attempt. The first task, to identify a specific systems approach, was simplified by the seminal work of Ryan's (1970) "Model of Adult Basic Education in Corrections." The successful attempt by Ryan to develop a nationwide planning model was well documented, proven in the field, and prepared through the use of a systems analysis process called *anasynthesis.*

Support for the use of systems analysis in adult education can be found in Morphet and Ryan (1968), who feel that effective planning is not a process of speculating but is a rational analysis of pertinent information drawn from the environment and from people who will be affected by the planning. Morphet and Lesser (1967) deplore the fact that curriculum planning has been primarily a series of segmented operations with little attention being given to the totality and meaningful relationship among parts. Cook (1966) notes that objectives cannot be met without determining the facilities or services that will be needed to complete the objectives.

SYSTEMS ANALYSIS

"System theory," says Knox (1967) "assumes that an agency or other social organization consists of an interdependent set of activities composed of subsystems which function within the larger settings of parent institution and community." Support for this notion is offered by Katz and Kahn (1966) who advance the idea that a system (such as an adult education institution) may be conceptualized as obtaining inputs from its total environment and transforming these inputs in some way to enable some product or service to flow into the environment. An illustration of this point can be found by examining the following simple paradigm:

1. Identify environment	2. Make transforms	3. Develop product

Hilton and Gyuro (1970) strongly stress the importance of initially conducting an assessment of all facets of the system before undertaking further planning. In his evaluation model Kaufman (1970) calls this all-pervasive phase *problem identification.* His commitment to an initial identification of all facets of a program parallels the previous notions. Hartley (1968) in his review of the PPB system of planning refers to this initial conceptualization phase as a rational assessment of resources, while another study (Stufflebeam, et al., 1971) describes it as determining input specification in terms of characteristics and conditions. Continued support may be found in Morphet and Ryan (1968) who claim that effective

planning is not a process of speculating but is a rational analysis of pertinent information from the environment to be affected. Coombs (1968) compares this process to a doctor who, while not having a complete knowledge of every detail of a human being's system, finds solutions to problems by "concentrating upon selected critical indicators and relationships within the system and between the system and its environment."

It is obvious that these theorists, while using different terminology, demonstrate several commonalities. They all believe that inputs into a system must be identified carefully before subsequent planning. Each feels that the data accrued while conceptualizing the system will be needed in all later decisions. They also would agree with the notion that failure to make an exhaustive and thorough analysis of all factors in and out of the system's environment will appreciably affect the implementation of the program plan. Finally, they would all agree that, because all elements of a system are interdependent, failure to acquire complete data relevant to one element will restrict development of all others.

The systems technique which bests organizes, simplifies, controls, and combines various parts, functions, and processes is *modeling*. According to Ryan (1970), modeling is the implementation of system theory in a graphic model displayed in a flow chart form. She points out that "as abstractions of reality, models provide means of relating and combining elements to create new wholes and explain complex processes or systems by analogy." A model provides guidelines for an early exhaustive, interrelated, and usable compilation of real life data.

ANASYNTHESIS

Silvern (1972) uses the term *anasynthesis* rather than *systems approach* and describes it as consisting of analysis, synthesis, modeling, and simulation:

1. Analysis is performed on existing information to identify the problem, identify existing elements, and identify interrelations of elements.
2. Synthesis is performed to combine unrelated elements and establish new relationships, thereby forming a new whole.
3. Models are constructed which can be used to predict a system's effectiveness without actually implementing the system.
4. Simulation is performed to try out various alternative solutions on the model; the best alternative solution is usually selected and later implemented in real life.

It is obvious that systems engineering and anasynthesis are management techniques for coping with complex systems and problems. The application of this technique should produce better results than simply making a decision and implementing a solution without considering carefully the various alternatives.

ANALYSIS AND SYNTHESIS

The importance of an initial analysis has already been discussed. That discussion supports Silvern's (1972) notion of the critical importance of this initial assessment.

The process of synthesis will be described in detail later. It requires thorough examination of all initial functions developed through analysis. For those readers who wish to view synthesis in action at this time the discussion in the next section relating to the process by which the model was built in Georgia provides two figures that will provide more information.

MODELING

The task to produce an easily understood and employable systematic planning process is best met by the development of a planning model. Magrabi (1964) defines a model as "an abstraction typifying any real situation belonging to a specified class. Concepts representing selected elements from the real situation are arranged in a logical system." Models are reproductions of given phenomena in the form of a graphic analog or other symbolic representation of reality. While models do not constitute theory, they do describe real counterparts and serve as a basis for predicting performance achievements. The theoretical function of models is basically methodological and descriptive. They are devices for generating ideas, for guiding conceptualizations, for generating explanations, and for describing the procedures taken to resolve problems in a true to life performance situation. A model must be consistent, generalizable across levels and phases of system design, and arranged orderly into a meaningful whole. Model building, according to Quade (1966) is a disciplined approach for administrative decisions in that it allows for or requires the planner to deal with essential parts of a structure in terms of central elements and subsystems. Ryan (1970) notes "that as abstractions of reality, models provide means of relating and combining elements to create new wholes and explain complex processes or systems by analogy."

Modeling is defined by Silvern (1972) as a conceptualization in the form of an equation, a physical device, a narrative or graphic analog representing a real life situation. Systems modeling relies on graphic analogs and

equations since it is usually a *process* model: inputs are processed and outputs furnished. The most common graphic analog is the flow chart model. This program planning model is offered to readers in a flow chart form.

SIMULATION

Simulation is a process, in contrast to a model which is an abstraction. In general, there are two steps in simulating (Silvern, 1972):

1. To test the model and debug it until it seems to have a very high correspondence with reality
2. To use the model as a problem-solving device, selecting problems from real life, and producing alternative solutions as prerequisite to applying the best solution

For our purpose a simulation takes place in the development of a narrative for each step in the planning process. This narrative may be either in written or spoken form. When a group of people is dealing with first-level decisions, that is, with major functions and not their explicit components, a narrative is usually spoken. As the simulation becomes more explicit, or detailed, the narrative becomes written. A goal of any simulation or model is the development of a written narrative which can be used as a planning tool. The narration will describe the functions in terms of descriptors inside of rectangles and their relationships in terms of original paths. Narratives are used later to produce alternative solutions.

Silvern (1972) has identified the values of a narrative solution and the following eight have direct application to our programs.

1. The planner must examine procedures (functions) represented by words (descriptions) inside of rectangles. Since each descriptor begins with an action verb which is directive, the planner is provided with a starting point: he either explains an action or justifies bypassing the function. He cannot avoid decision-making.
2. The user must consider a multitude of inputs to a particular function thus producing more complete decision-making within the function.
3. The user has alternative solutions and is expected to trade-off and select one, hopefully the "best alternative" for the duration of the particular simulation.
4. The user is guided into performing synthesis since different solutions to each problem are developed.
5. The user can modify his earlier decisions by following feedback loops.

6. The user can work at the problem on the paper model without incurring any expense or committing errors involving real people, funds, management or facilities.
7. The user can create numerical values, such as system parameters, and insert them into the model, thus implementing quantitative techniques at a low level of sophistication without having to develop complex equations.
8. One or more users can work on the same model, either together or independently; solutions are enhanced in group activity.

LANGUAGE TERMINOLOGY

To help you understand the planning model, the following descriptions were prepared to demonstrate the kinds of information needed to develop a local plan. Following this, you should read the narrative to learn how the model was used by one local system. Before reading this material you will need to take five minutes to study the language used throughout the descriptions.

1. Functions
   A rectangle indicates a task (function) that must be performed. In other words, a decision or series of decisions that will need to be made. Your decisions are only as good as the amount and quality of information you have acquired to help make the decision. We have identified at least 211 functions which you may need to perform. We will use the terms *function* and *subsystem* interchangeably.
2. Descriptors
   Each function is identified by a group of words describing the task. We call these words *descriptors.* Descriptors are always expressed in upper case letters, and each descriptor begins with a directive action verb.
3. Numeric Code
   To help you follow an information flow we use a point numeric code. This has use for computer programs but is of immediate help to planners in determining appropriate planning sequences. This code consists of a number sequence used to indicate component parts:
   5.0 A system
   5.1 Major subsystem of 5.0
   5.1.2 Subsystem of 5.1
   5.1.2.1 Subsystem of 5.1.2

4. Signal Paths
   Signal paths are intended to help you follow the direction of planning and to see where information is to be sent. A signal path is a line with an arrowhead indicating the direction which information shall flow. It always exits from one function (rectangle) and goes to another. A planner follows arrowheads to discover information flow. There are two major types.
   a. Feedforward (FF) signal paths. These signal paths are indicated by FF and in a chart are enclosed in a circle on a signal path. They indicate that information is sent ahead, bypassing several functions, to help you in subsequent planning.
   b. Feedback (F) signal paths. These signal paths are indicated with the letter F enclosed in a circle on a signal path. They indicate that information is carried back to a preceding system to help you adjust decisions. Feedback paths are important for evaluation.
5. Systems
   Each function is also called a system. When several functions or systems make up a larger system, we call them *subsystems.* In the final model we have a system made up of nine subsystems. These nine subsystems have numerous other functions we will also call subsystems.

To review these five language items, locate on your chart the subsystem (5.0) APPLY ENROLLMENT PROCEDURE. The descriptor tells you that each program has enrollment procedures, used for enrolling students. If you don't have such a procedure, you should consider developing one. The first function (we will use this word interchangeably with subsystem) is to Welcome To Center/Classroom and has the numeric code 5.1.1. This tells the planner that he is to perform this function before any other. The descriptor tells the reader what function is required but offers no details about what materials may be required, how to perform a task, and so on. Developing these details is a task for the planner to insure that the specifics are best suited to his program. The signal path indicates that after welcoming the student, the planner should complete a personal data sheet, (5.1.2) Fill Out Personal Data Sheet. Again, the particulars are not listed for obvious reasons, but when this function is to be performed such an instrument must be available.

Perhaps the first step to be taken by someone interested in using a systems model is to establish an information storage and retrieval system. When computers are not readily available, a drawer in a file cabinet will suffice. This drawer should have nine major sections, corresponding to each major subsystem, or each major area of planning. When information of any type is acquired, you store it in the appropriate location. Thus, your master

copy of the personal data sheet required of each student (in 5.1.2 of the model) should be stored in the section which reads: (5.0) APPLY ENROLLMENT PROCEDURE and within that section in a folder devoted to 5.1.2. Establish subsystem folders only when your data bank is sufficiently large or sophisticated enough to warrant. If and when adult education becomes computerized, you will have a tremendous startup advantage. There are, of course, other reasons for such storage of information such as reports, training, planning, manipulating information, and a clear filing system which can be understood by everyone working in your program. If nothing else, your secretary will thank you.

GUIDELINES FOR A NARRATIVE SIMULATION

The following guidelines are provided to enable the planner to understand the purposes and functions of a simulation. They were used in the model developed at West Georgia College.

PREDETERMINED SOLUTION

Planners sometimes begin the simulation with a predetermined or single solution in mind. This is usually based on preconceived notions or personal experiences. In some cases, they have misconstrued the purpose of the modeling and simulation and do not seek clarification. Worse still is the notion that they are merely formalizing or legitimizing current practices or management desires. This idea is negative since planners consider it as a way to keep superiors "off their backs."

If a simulation begins with a predetermined solution or if the planners are allowed to operate with negative motivations, there is no need to complete the simulation. Predetermined solutions are debilitating and so weaken the basic concept of simulation that every effort must be made to insure that they do not occur.

CONSTRAINING INFLUENCES

Innovative or "open minds" willing and able to set aside known or imaginable obstacles are important to successful simulation. Planners tend to consider constraints immediately during the formative stages, rather than waiting until the model provides for consideration of constraints. Obviously a model which does not provide for such factors is not likely to be successful. Planners must be made to realize that the simulation will dissolve limitations, obstacles, or constraints at appropriate times. In other words, the user shouldn't consider constraining factors until they appear. A simulation should "free" a user for maximum input rather than constrain him prematurely.

SUBSYSTEMS

Every function in the model must be considered during a simulation. While no function can be ignored, some may be carefully thought through

and then bypassed. Bypassing is appropriate as long as the planner provides an appropriate, logical course. In any event, bypassing of functions should be minimized, especially for the neophyte. If too many functions are bypassed, then one of two things is happening:

1. The model is not realistic or accurate and, as such, is unsuitable for the problem. It needs to be redesigned.
2. The users are not fully aware of the implications of their bypassing activities, and some reinstruction may be necessary.

Feedforward (FF) Signal Paths

These paths carry information forward to a future step. This information must be utilized in the subsystem ahead as data for comparison with other inputs to that subsystem. Feedforward signals cannot be bypassed.

Feedback (F) Signal Paths

These paths carry information back to a preceding subsystem and act to control the output of that subsystem. Since the feedback controls output, feedback signals should not be bypassed during simulation.

Quantification

Whenever possible, information should be quantified in meaningful terms. This can be done without sophisticated instruments. Such units as time in minutes, space in square feet, and cost in dollars are examples.

Detail

The only limit placed on the level of detail, or resolution, is by the time allotted to the planners for developing the narration.

Documentation

Every mention during simulation of a form, report, organization, instructional program, file, test, equipment, or similar item must be clearly identified. Identification includes origin, author or producer, date, coding numbers, etc. In this way another person can read the narration with maximum understanding and can locate sources if necessary.

CYCLING AND REPETITION

The process of cycling is critical to transfer of simulations to the real world. As one processes a problem or program through a model, he becomes more proficient, the decision-making data more complete, and the

solutions more viable. Simple problems can be reprocessed as well as the more complex ones.

There is no reason to limit the number of times a problem is processed through a model. In fact, when solutions are unrealistic or poorly defined, the need for repetition is greater. The general rule is to process problems through a model until realistic solutions are acquired. The user should become more effective as he achieves more sophistication in using the model.

PARAMETERS

The use of parameters may need some clarification. A parameter is a limiting factor that cannot be avoided. Time, costs, facilities, and available staff are examples of parameters; all can be given numerical values. A parameter is a set figure which cannot be removed or disregarded. Its numerical value, however, can be changed to either more or less than the original figure. For example, a budget is a parameter; it must always be considered. Its total value may be $60,000, but it could be manipulated to allocate only $50,000, or conceivably increased to $75,000 with the location of additional funding sources.

EXPLANATION OF THE MODEL

The development of a planning model applicable to adult and ABE activities in Georgia has several important advantages:

1. It would permit trying out various decisions or plans without interfering with the established system.
2. Because a model serves as a method for understanding specific phases of an ongoing operation, it would provide parttime staff with a means of understanding programs.
3. It would represent the operation of the organization.
4. It would enable prediction, in a general way and at little risk, of how certain aspects will function.
5. It would be usable at all planning levels with a minimum amount of training.

To develop a planning model, three tasks were involved. First, considerable time was spent examining state, local, and teacher planning processes. Second, a group of people involved in adult education was selected to be trained in the skills needed to develop a statewide planning model. Funds were available for this function. Third, the model was field tested, distributed throughout the state with an accompanying narrative, and the trained participants were used as a cadre to disseminate it through one-day regional sessions.

During the summer of 1972, a Program Planning and Systems Institute was funded by the Office of Adult Education, Georgia State Department of Education, to meet the second task. Forms were designed to gather data required for building the model. These forms were adaptions of those used by Ryan (1970), Boone (1968), and LaForest (1966). They were sent to all participants prior to the Institute. The first three days of Institute activity were devoted to training participants in the use of programing language and flow charting.

The next step was to develop a first-level model, in other words, to identify all of the major areas that should be considered in planning an adult education program. The 36 participants were divided into four groups, each of whom identified major areas and their relationships. There was a great deal of coordination among groups; and one group was assigned responsibility for concurrent maintenance of a composite model. Together, the 36 participants identified 11 major areas, or subsystems as shown in Figure 1 which follows.

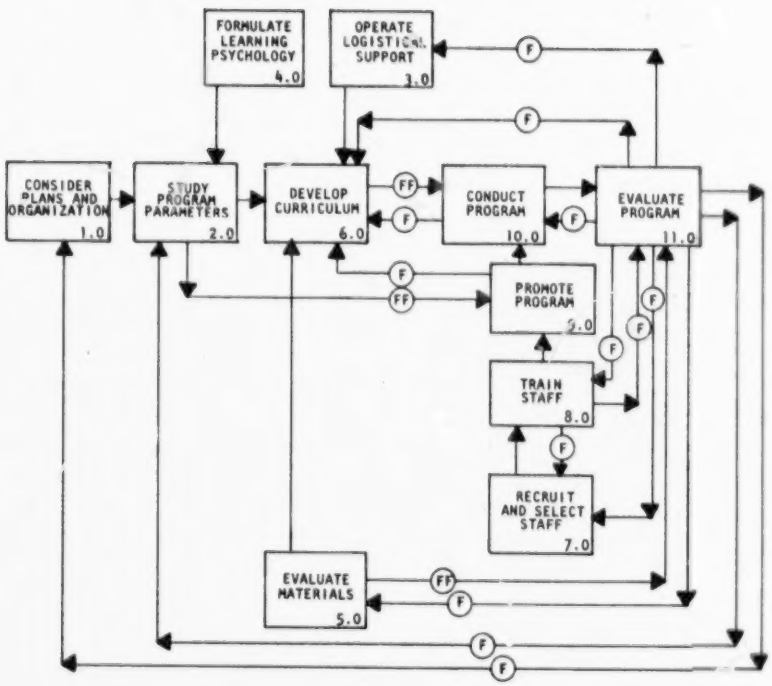

Figure 1. Initial Planning Model at First Level of Detail

(1.0) was to reflect state and federal plans, since all programs are dependent upon these planning levels.

(2.0) was organized to enable identification of planning parameters. An attempt was made to show a close relationship between (1.0) and (2.0), since local programs have little control over other parameters.

(3.0) was a reflection of an expressed need to develop and identify logistical support at local, state, and regional levels.

(4.0) was developed when participants thought it desirable to identify various learning psychologies used in adult education programs.

(5.0) represents the systematic evaluation of materials, a function assigned to staff levels since virtually no faculty has time available nor expertise to perform this activity, yet all see this activity as providing usable materials.

(6.0) the development of a curriculum was considered at the time to be the core of the model incorporating development of individualized instruction.

(7.0) was established to allow for staff and faculty recruitment and selection.

(8.0) provided needed training as outlined in the Georgia Staff Development Plan.

(9.0) was created to strengthen one of the weakest links in many programs—recruitment and retention of students.

(10.0) was seen as a simple subsystem, and little synthesis was expected.

(11.0) evaluation, was typically seen as a terminal function.

A low-level simulation, by talking through, established understanding of the model by the participants. During the following eight days, the model was expanded to second and third levels of detail. Further synthesis developed 221 subsystems and 182 signal paths, totaling 194 relationships. Debugging took place by narration/simulation and the resultant model had 210 subsystems and 172 relationships.

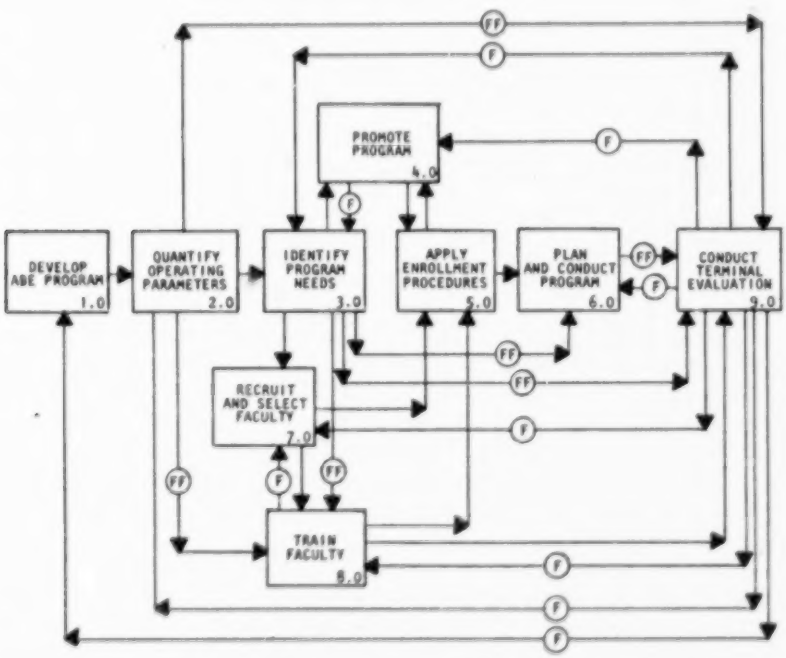

Figure 2. Second Planning Model at First Level of Detail

Two major changes occurred in the second model as reflected in Figure 2. The "Needs" function was restructured to become a major subsystem

(3.0) and placed earlier in the flow where it would produce information to be used in planning. A new subsystem, (5.0) APPLY ENROLLMENT PROCEDURE, was determined to be critical for solving recruitment and retention problems and should naturally precede (6.0) PLAN AND CONDUCT THE PROGRAM.

At this point in the development of the final model, participants separated into five groups to test and debug the model through simulation at home until it closely approximated reality. Five simulations were planned to represent the following types of adult education programs:

1. rural one-man operation
2. rural three-man operation
3. urban-rural operation
4. largest operation in the state, serving more than 1.5 million people
5. statewide non-teacher planning level, using a coordinator team

The most logical way to foster understanding of the model is through an analysis of each descriptor and the tasks it may involve. We will go through the model subsystem by subsystem, explain critical functions, describe the kinds of information and tasks needed to perform these functions, and provide concrete examples at every opportunity. Experience has shown that program coordinators benefit from some explanation of the ramifications of the subsystems and how they may be employed. Practitioners and users often fail to gather enough information during the preparation of the narrative, or the detailed writing out of tasks. At other times they do not describe how a function will be performed. This discussion will serve as a training background for any person wishing to use the model with inexperienced planners and users.

Although the model is a series of interrelated functions, there is a natural dichotomy for discussion, which has implications for planning and training tasks. First, we will discuss the administrative and organizational functions for coordinators, staff development specialists, state staff, and consultants. Following this is a discussion of those functions in the model which are of direct concern to teachers, learning center directors, and other faculty members. The planner must, however, see that relationships within the plan are maintained.

Some of the information needed can be easily located, such as admission forms. In this case they need to be reported and identified. Other functions will require information that needs to be searched out or developed in detail. If an admission form is called for in one function and no such form exists, then an obvious need exists for an additional task to be performed. This section will provide many concrete examples needed to develop an understanding of the type of information necessary to perform a specific function or to develop a narrative of a plan of action. Under no

circumstances should any user assume that these examples can be carried into a local plan in total. They are intended to be illustrative.

At this point the reader will need to keep the model close at hand for ready reference. Sufficient space has been provided for the reader to make notes on the chart itself.

FOR SUPERVISORY, PLANNING, AND ADMINISTRATIVE STAFF

We are beginning with this section because the majority of the functions occurring here precede classroom or learning center application. This section will build a base upon which the next section will operate.

1.0 DEVELOP ABE PROGRAM

The first of the nine major subsystems is where planning begins. It is supportive to the other systems as a base point of administrative, policy, and regulatory procedures. As the planner cycles through the model this subsystem will become more explicit. For example all of the information or developed narratives will be stored or fed back to the (1.0) subsystem and, as in the case of state level personnel, can be stored in (1.2) Developing State Plan, or for local programs in (1.3) Develop Local Plan. Of course, all of the local plans are fed to the state level planners as input needed to develop the state level plan. The important thing to remember is that an effective planner continuously cycles through the model or specific subsystems. It is not a one time or annual effort since this model is also a continuous evaluation process. (The more the planner "cycles" through the model the more specific and predictive he will become.) Then, too, a planner must not forget that he can simulate specific problems using the model (see section on simulation).

The (1.1) Identify Federal Program subsystem is offered at this point to enable planners to determine federal procedures. It is of more specific use to state level planners. Nevertheless local planners should make every effort to acquire copies of guidelines stored in (1.1.1) Publish Guidelines since such guidelines include considerations as compliance, student eligibility, and funding language. Obviously no planner can develop a plan with functions which are contrary to federal guidelines. In your file drawer, store such guidelines in a folder marked (1.1.1) Publish Guidelines for subsequent use and referral.

The rest of the subsystem is concerned with the process of federal review of a state plan. The local planner's role is one of supplying informational input to the state officials. State officials need to acquire all publications

from the federal government. This affects development of the state plan. These materials are stored in (1.1.2) Apply Criteria. The interrelationships indicated by the signal paths suggest that the state plan is submitted to the federal government, which serves as the reviewing agency. In some instances there is a return of the plan for further work. Names of "contact" people at the federal level and the necessary submission procedures are stored within this subsystem.

The (1.2) Develop State Plan subsystem is also intended primarily for state level planners. Any information in terms of state guidelines, forms, procedures, regulations, policy requirements and the like need to be acquired and stored in this subsystem. The model is formulated on the premise that local plans are compiled by state staff in this subsystem and used to develop the overall state plan.

A state must develop an (1.2.3) Operational State Plan. That is, they must determine how their final state plan will be organized and put into operation. This model can be such a plan. We use the descriptor Operational Plan to indicate that the plan at this level is not detailed but consists of the procedures necessary to accomplish the state program. The Operational Plan is reviewed by the (1.2.4) State Advisory Council, and all of their recommendations are stored in this subsystem. There is feedback here to enable review by the Advisory Council of any step taken to meet their recommendations. Following this activity, the Planning Guidelines are prepared and distributed (1.2.5). If no such guidelines exist, then they need to be developed. This publication may well serve such a function since it consists of a planning process and includes directions and examples for its use. A signal path in (1.2.5) indicates that this information is fed into (1.3) Develop Local Plan subsystem and is cycled through that subsystem before its return to (1.2.6) Design State Plan. The function of (1.2.6) Design State Plan is to accumulate all of the local plans, review for compliance and cost analysis, and then draw all of the local plans into a concerted total plan applicable for the entire state. There are signal paths between (1.2.6) Design State Plan and (1.3.2) Design Local Plan to indicate communication between state and local planners stressing a system of submission, review, and resubmission.

Local planner's first self-directed activity occurs in the (1.3) Develop Local Plan subsystem. At this first cycle level the local director must (1.3.1) Develop Planning Team Approach which will be represented by a narrative (see sample). It is necessary to develop the planning model in narrative form which will be carried out in practice. The narrative itself stored in the (1.3.2) Design Local Plan function. The designated (1.3.3) Review By Local Authorities examines the first level plan in (1.3.3) and acquires feedback from (1.3.4) Local Advisory Group. At this point the local planner is ready to develop his narrative of the rest of the model, which in turn becomes

information used for the next cycle (1.3.2) Design Plan. This narrative is reviewed in (1.3.3) Review Local Plan By Local Authorities with feedback from (1.3.4) Local Advisory Group and is forwarded to (1.2.6) Design State Plan for approval and inclusion in the master plan. Any information from further effort or recycling of the model is stored for future use or request by state officials. There is feedback between (1.2.6) Design State Plan and (1.3.2) Design Local Plan to insure that local plans are operable and legal and fit into the state plan. It is a rare occurrence when local plans are fully acceptable (suppose you budget for more money than is possible to acquire?). Following this feedback signal path, which may happen several times, approval by state officials is acquired and implementation begins in (1.4) Implement State Plan. Such an approval is stored at this point.

In review, essential to (1.2.6) Design State Plan is the careful compilation of all local plans and the coordination of all these plans into a statewide master plan. Such a plan is fed back to the local level and this closed submission review cycle permits maximum communication and development of realistic planning goals.

Following (1.2.6) Design State Plan and its review by local planners, the plan is ready for implementation. The development of a state plan is not wholly dependent upon local input since the state officials are also using their own staff, the ABE planning model, and the operational plan from (1.2.3) to insure maximum input. The data from (1.2.6) are fed back to (1.2.3) to insure necessary planning adjustments.

Research has indicated several points during the planning continuum where a breakdown of communication and planning occurs. First, explicit directions are not provided to planners. Second, a clear delineation of planning tasks is not made. Third, a submission/review/resubmission pattern has not been developed. Fourth, there is a time lag in communication. Hopefully, the planning process advocated by this model will greatly eliminate such discrepancies. With local planning, the same problems exist. Local planners often develop plans without maximum use of staff. When coordinators are necessarily parttime, such a course of action leads to incomplete and inadequate planning.

Local planners should take great care in defining the roles and tasks in the (1.3.1) Develop Planning Team Approaches. The process used by the Gribble-Spats district gives an indication of how one local planner made maximum use of parttime staff to meet the functional requirements of this subsystem. It has as much applicability to the small parttime staff as it does to multiple district programs.

2.0 QUANTIFY OPERATING PARAMETERS

Accurate and complete information in this subsystem is essential. It will enable maximum staff and budget use. The acquisition of a free learning site has obvious budget implications. This subsystem may have to be recycled several times before the planner is convinced he has adequate information. Considerations made here have a multiplier effect since they closely influence the entire model, plan development, and plan operation.

The task in this subsystem is to acquire quantifiable data for the purpose of making supportable and justifiable decisions. In the past, the lack of such data has crippled many adult programs by causing decisions to be inaccurate and inefficient, thus ineffective. A planner who cannot justify his planning decisions with hard data is in an untenable position. How does a planner justify the need for a learning lab without attendance figures? This subsystem enables budgeting justification.

The (2.1) Identify Learner Population subsystem is designed to indicate the need for determining potential learners or target populations. This function is especially important to Georgia since state funding for the forthcoming year will be computed on the basis of ADA and target population figures.

All potential learners (2.1) are identified through the use of census, previous enrollments, data acquired from other local and state agencies (such as the Labor Department) and other local sources. Forms to provide such data should be stored here. Since any budget adjustment in (2.2) is determined in a large part by the number of participants acquired in (4.0) Promote Program, this data must also be obtained.

After the learner population has been reported, the budget can be computed through the appropriate funding formula and stored in (2.2) Establish Budget. Any negotiation with the state to establish budget adjustments must also be noted in this function and used for further analysis. Budget adjustments along local levels need to be identified here. Adjustments will consider such things as local donations, use of volunteer help (thus reducing staffing budget), outside resources, and federal funds. The budget breakdown is fed into the next subsystem. The signal paths here indicate that budget information is fed to all subsystems in (2.3) Determine Resources, the next subsystem.

It may be helpful at this time to discuss an example of the kind of information needed to make budget adjustments. If a need arises in (3.0) Identify Program Needs for a class to teach Braille and you have an insufficient ADA, the following quantifiers have to be considered:

1. Teacher is paid on the basis of smaller ADA according to the scaled formula.

2. Place teacher at highest pay level so the smaller ADA will not be detrimental to adequate pay.
3. Class cost may be reduced by availability of free teacher from Family Services unit of the state department.
4. Cost of materials may be reduced by free materials from Library of Congress.
5. Special nature of class may allow lowering of ADA requirements by SDE.
6. Special learning facilities required may prohibit holding the class.

In (2.3) Determine Resources much of the success of a local program can be predicted. Cost-free location, talents, and community resources may allow you to extend your budget. A cost-free learning center site will have an obvious effect upon the budget in (2.2) Establish Budget. Data acquired and stored in this subsystem, (2.3) Determine Resources, may have the following typical effects:

1. Community resources may alleviate budget requirements for space and make less demands on budget funds.
2. Free facilities or equipment determine budget considerations as well as community resources. The data from (2.3.2) Identify Community Resources will have budgetary effects on (2.3.1) Facilities & Equipment and on staff and faculty funds. Budget determines size of staff and faculty. A free learning location could release funds for staffing use.

In (2.3.2) Identify Community Resources every effort must be made to identify personal, fiscal, and physical resources, such as free space; business and industry resources; church, social, and civic groups; and governmental agencies that may have an input into your program. These agencies are natural extenders of your program for they not only provide an input of students but also funds and resources. The sample narrative for this subsystem may help to identify how one program went about this task. In Alabama one program has an extensive volunteer teaching group. This releases money for other budget needs. This group of volunteers was supplied by church groups.

In (2.3.1) facilities and equipment are identified and recorded. Not only are present facilities and equipment inventoried but potential aid from (2.3.2) Identify Community Resources should be identified. The state department always requests a yearly inventory, and the information stored in this subsystem will provide for rapid reporting on any forms required. One program in Georgia stores its information on these annual report forms.

(2.3.3) Establish Staff Requirements requires the planner to identify his staff needs. In Georgia the new budget formula dictates the extent of

staffing. Staffing includes assistant coordinators, secretaries, and supporting staff such as janitorial services. In the area of supporting staff the (2.3.2) subsystem often supplies cost free services.

The last function to be performed in this subsystem is (2.3.4) Establish Faculty Requirements. Based upon ADA and target population, the number of faculty paid by the state department is predetermined. The needed faculty is identified and this data stored here. You will need this information for later staff development in (8.0) TRAIN FACULTY as indicated by a signal path to that subsystem.

The planner is now ready for (2.4) Evaluate Parameters. For some programs this function depends on a listing of all quantifiable data obtained in the preceding three subsystems. More detailed examples of how to meet this functional need can be found in the sample narrative.

The last function to be performed in the (2.0) subsystem is (2.5) Modify Parameters. Remember that parameters in themselves cannot be modified, but their values can. Such modifications should be made at this point, subject to examination of the data acquired in the total subsystem. Any decision made here not only affects the budget but all of the subsystems in (2.3) Determine Resources. Thus, if you plan on using volunteer teachers from a civic club, this information must be made available to the units previously identified in (2.3.2) Community Resources. Once again, for the sake of some sort of brevity, examine examples of parameter modifications provided in the sample narrative.

To briefly summarize the discussion of the (2.0) QUANTIFY OPERATING PARAMETERS subsystem, every possible effort must be made to get information that can be quantified by numbers, money, time, and the like. Factors must be carefully analyzed. Such data are to be stored in proper subsystems and, if the planner is using the flow chart to serve as a filing system, stored in folders.

There are important signal paths to observe in this subsystem. External relationships, that is those relationships which flow out of a major subsystem into another, are of two types; those which indicate data is of a feedback nature and those which indicate feedforward. Important relationships are:

1. From (6.3.2.3) and (6.3.2.4) back to (2.3). The actual number of people attending classes and learning centers constitutes the ADA which determines budget. Data of this type need to be stored for future planning cycles and future budget requests.
2. From (2.3.4) forward to (8.1). Faculty requirements will determine training tasks. If you need learning center people, you will need to provide training and retraining.

3. From (2.3.3) forward to (9.1.3). Staff requirements will provide indexes by which to evaluate terminal staff performance. These requirements need to be stored in (9.1.3).

3.0 IDENTIFY PROGRAM NEEDS

While all subsystems are important, need identification undergirds any effort in planning and conducting an educational program. Accordingly, this system requires an exhaustive effort on the part of any planner to accurately discover the various needs which will determine system and planning viability. An important filter of needs is the program parameters identified in (2.0). There may be a need for a French class, but if there are a small number of participants, a restrictive budget, no available teacher and an ABE policy prohibiting this activity, then satisfying such a need is not realistic. Need identification requires a survey of the universe the participant inhabits as well as determining his own specific needs. Such an input is provided by (3.1), (3.2), (3.3), and (3.4) and is reflective of the approach advocated by Tyler (1950).

Teachers (3.2) are most likely to be able to reflect the needs of a learner because of their training and contact with students (experience). Planners should consult former faculty and any teachers who have experience in dealing with adult learners. Teachers will also have personal needs that must be considered such as working conditions, materials, and more important, recognition, job security, and professional satisfaction.

Use of consultants (3.3) is also important. They bring subject-matter expertise, training and planning skills, and experience not usually available to planners. Consultants should be drawn from the state, college, and local levels.

The environment surrounding the program (3.4) will have needs that must be considered. Reference is made to economics (business and industry), social and cultural, and political requirements (for example, the rug industries' need for employees who can properly read instructions). All of the needs identified in these three subsystems are fed into (3.5) for ranking. Following the ranking of needs, the planner must select the needs which the program will seek to alleviate. Such a selection may require the planner to seek help from his staff.

In (3.7) Formulate Program Management Objectives, the planner is required to establish direction to his program in terms of objectives. Such objectives will also be used to direct the activities of other subsystems and will serve as evaluation standards. We will discuss this subsystem in greater detail later.

We have offered a short description of the entire (3.0) IDENTIFY PROGRAM NEEDS subsystem as an initial attempt to show the

relationships among subsystems. This general description will now be followed by a specific discussion of each subsystem. In (3.1) Identify Student Needs-Program Level, the planner has four functions to perform. In (3.1.1) Select Sample Group the planner should select a group of clients representative of the population he will serve. Be sure to get a proportionate cross-section by using learners with varying cultural, social, and economic backgrounds. Former, present, and potential students should be involved.

Data from (3.1.1) are sent to (3.1.2) Prepare Needs Inventory. The planner prepares a needs inventory in the form of a questionnaire, oral or written. Make sure questions are global and do not bias participant response. The West Georgia College inventory can be used to develop such an instrument.

Administer the inventory (3.1.3) to a portion of your sample and identify ambiguities and administration problems, then modify the inventory (3.1.4). The modified inventory is fed back to (3.1.2) Prepare Needs Inventory before the final testing.

Some planners prefer not to use a sampling technique as indicated by the (3.1) function. They insist that they can consider such needs from currently enrolled learners. In this case information obtained still needs to be stored in this subsystem. Such an approach raises, however, the issue of need prediction. If the program does not have at the time any students from the leading industry in town, how can they predict potential needs from that area? The resources identified in (2.3) Determine Resources will provide channels for determining need evaluations. Sampling still seems to be the best way to discover new or emerging needs. In any event, the planner must send his information to the ranking function in (3.5).

In (3.2) Obtain Teacher Recommendations every effort is made to interview the teaching faculty to determine their perceptions of learner needs. The successful planner cannot ignore the needs that teachers themselves express. Since most programs in this geographic area have small staffs, there is no need to sample the teaching faculty. Some form should be developed to record this input; it is stored at this point for future use and analysis. Our system does not restrict such an analysis to the immediate teaching faculty but includes teachers from the public school system. This seems to be a most logical extension of this function.

In (3.3) consultant recommendations are also obtained in the same manner as teacher recommendations. Some kinds of consultants who could be useful are: college staff, faculty from other school systems, administrators of related programs, and state department staff. The instrument developed for gathering teachers' recommendations would seem to be applicable to this function. We recommend using consultants to develop a need evaluation instrument or process; for Georgians, the state department has identified consultants willing to do this.

(3.4) Identify Societal Needs is the final area of needs to be considered. Once again, the interrelationships identified in this model come in to use. The resource units in (2.3.2) Determine Resources can be used. It is also logical that at the time when these resources are initially contacted an informal need evaluation can also be made, thus eliminating duplication of time-consuming visits. A successful planner will try to coordinate his activities and not wait until one function is performed to begin another. It is natural to have many functions being performed at one time, especially in this major subsystem. Judicious use of time is important to the adult education planner since he most likely has a limited staff. The number sequence is for storage use and is not intended to dictate an unchangeable sequence. Again the reader is referred to the sample narrative for examples.

Too often, theorists talk about identifying needs but go no further than discussion. (3.5) Rank Order Into Priority List is provided to insure that a "pecking order" be established. All program needs are identified and ranked in terms of high to low priorities. A high ABE priority need would be literacy classes, while a low priority item would be a music appreciation class. The signal paths indicate that all of the data from the previous subsystems are fed into the (3.5) subsystem.

Needs to be focused on first are identified in (3.6) Select Specific Needs To Achieve. It is unfortunate that staffing and budget limitations often restrict the needs that will actually be met. While the majority of learners may need GED academic work, state and federal policies are restrictive. Facilities may also keep the planner from attempting to meet specific needs such as machine work classes, cosmetology, or truck driving courses. Accordingly, the planner needs to determine which needs he can meet subject to program goals.

On the basis of the selection accomplished in (3.6) Select Specific Needs To Achieve, the planner is ready to develop program management objectives which will guide him in the management and evaluation of the program. We feel that the Management by Objectives (MBO) approach to program management can be employed fruitfully and effectively in (3.7) Formulate Program Management Objectives. In any case, the planner needs to clearly establish management objectives that can be communicated to his staff and faculty. These objectives are not to be construed as learning objectives (a function which occurs in the (6.3) Develop Individual Plan Of Study subsystem). For every specific need selected in (3.6), management objectives must be established. An example here, supported by others in the sample narrative, is: Use HEW consumer educational materials for the consumer education class to be taught in Frisbee High School for the Model Cities learners.

The signal paths leaving (3.7) Formulate Program Management Objectives indicate the critical impact this function has upon the entire

model. They serve as director for subsequent activities and provide benchmark criteria for evaluation of program, staff, and planning effectiveness. Most program decisions, therefore, are directed by the (3.7) function. In (3.5) ranking priorities must also be accomplished carefully. All too often planners do not accurately determine priorities, preferring to react to needs as they "come along." This method insures poor allocation of funds, resources, and talents. Remember that program request must be measured against the management objectives in (3.7).

4.0 PROMOTE PROGRAM

No one area of adult and basic education has been more discussed (and cussed) than that of program promotion. This subsystem is another in the long line of attempts to meet the promotion obligations. It differs from preceding efforts in that it seeks to be specifically directive. Its position in the model is important, implying that acquisition of students precedes training and the operation of a program. This obvious order is sometimes ignored. The sequence of functions in this system is important, for it allows sequential planning and concerted efforts.

The first three (4.0) subsystems require that policies, goals, and materials be developed in an orderly fashion. The three succeeding subsystems are activity centered and deal with actual implementation of the material developed in the first three subsystems. The last two subsystems are concerned with follow-up and evaluative activities.

The entire (4.0) PROMOTE PROGRAM subsystem is concerned with publicizing a program and student recruitment. The concomitant facet of recruitment is always retention. We do not discuss this aspect in the model for the simple reason that there is no such thing as a retention process that can be delineated and structured. Retention is dependent upon good teaching. Nothing more needs to be said.

In (4.1) Develop Uniform Information Policies, the planner is required to set policies that will guide publicity and recruitment efforts. The function of setting policies requires the planner to identify not only operational policies such as "Do not commit the program for payment of advertisements without clearance," but activity policies such as "Stress availability of learning centers on a 12-hour basis." The (3.7) management objectives set in identifying program needs are fed into (4.1) Develop Uniform Information Policies, since they will determine the thrust of the efforts in program promotion. In other words, if learning center operations are a management objective, then publicity needs to be concerned and organized around such an activity. The key to this function is to insure that inaccurate or misleading information does not become part of a promotional activity.

These policies must be made available to all staff and faculty who will take part in the promotional effort.

(4.2) Select Informational Goals is the next step. This requires the listing of goals in terms of those to be stressed.

Examples of informational goals are:

1. Every teacher will make ten door-to-door contacts for four consecutive weeks.
2. Bill A. will develop a three-minute description of the program for use in door-to-door campaign.
3. Use of the Morehead Kit will take place three weeks before classes start at three radio stations.
4. Every major civic club will be addressed during this month of June using Bill A.'s 15 minute slide show.
5. All campaign efforts will begin two months before classes.

(4.3) Produce Promotional Materials requires the planner to identify staff or faculty members with talent necessary to produce usable materials for all people within the program. All promotional material need not be produced locally since some national media materials are available. The planner needs to contact state department or consultant staff for location of such materials. Types of materials that can be produced locally are: (1) one-minute radio spots, (2) posters, (3) newspaper articles. It is necessary for all adult education programs to make maximum use of staff in producing materials. For example, in Gribble-Spats, Georgia, one staff member had the line "We Support the ABE Program" included for one continuous month in every newspaper advertisement for a product or service. Promotion materials should apply to the three following systems and examples stored in the folder devoted to the (4.3) function.

(4.4) Contact News Media requires identification of the various news media available in a program area. Any special methods needing to be employed for use of local radio broadcasting stations should be included here. For example, some radio stations want all materials on cassette tape. It is also important to establish a time sequence based upon information goals.

(4.5) Contact Groups is a function requiring some effort at coordination of activity. Staff members and faculty who are members of the various civic and social groups identified in the subfunction will provide entree into these organizations. Also required by this subsystem is the listing of the groups identified in: (4.5.1) Contact Industry; (4.5.2) Contact Religious Groups, and others, including Head Start, Model Cities, unemployment offices and state and federal offices located within the program area; (4.5.4) Contact Social Groups such as garden clubs and fraternal organizations; (4.5.5) Contact Civic Groups including Rotarians, Optimists, professional socie-

ties; and (4.5.6) Contact Educational Systems such as public and private school systems' students who can take notices home. The object of contacting all of these groups is twofold: first, is to make your program known, and second, is to sell the services of your program. While making these promotional contacts, the active planner is also seeking to perform the (2.3) Determine Resources function, and seeking program involvement whenever possible in terms of money, facilities, and commitment for participation. Groups such as these are largely untapped sources for adult education programs. In addition to identifying all of the groups that will be contacted, the planner must also indicate how they will be contacted; set time and dates to insure not only pre-program contact, but also contact during the program to insure new student and resource input; plan the monies needed to produce the materials used in the group contact system; and identify individuals within groups who may wish to make inputs into the program. A planner may not be able to get total group involvement but the participation of individuals within the groups is no small accomplishment. In fact, it may prove to be beneficial at later times.

Perhaps the most important to all the functions in the (4.0) subsystem is (4.6) Contact Individuals, the remaining effort to promote the programs. Experiences in the field strongly indicate that (4.6.4) Communicate Door-To-Door is the single most effective way to promote the program, recruit new learners, and reinvolve old learners. The more effective planners have a well organized face-to-face program and usually acquire first time students most efficiently. The planner must carefully describe how he will conduct the (4.6) Contact Individuals function.

The (4.6.1) Communicate By Telephone subsystem is not the best promotional or recruitment approach. It is good, however, for making initial contacts to be followed up by (4.6.4) Communicate Door-To-Door. It is also a simple way to follow up on participants leaving the program or to remind them of special meetings.

(4.6.2) Communicate Through ABE Students can be effective if such a function is well organized. The best recruiters of new participants are present learners. A planner should develop a method for using them as recruiters and program promoters and describe this process or technique in detail.

(4.6.3) Communicate Through Public School Students is another process that needs to be further developed by the planner. At the present time, this function is being performed by sending home announcements typed on horrible purple sheets. One innovative adult educator had a recruitment contest for students. The planner needs to identify what roles will be performed in this function, and as in all other functions, establish times, and describe interrelationships with other functions of the subsystem.

(4.6.4) Communicate Door-To-Door still remains as the single most effective recruitment and promotional process available to the planner. It is also the most difficult technique to employ. The planner is obligated to describe the process by which he will meet the functional requirements of this subsystem. One program requires a set number of such contacts to be made and has this function in the contracts to be signed by the faculty. Perhaps the most logical way to approach this task is to establish materials and provide practice to the faculty and staff employed. One system has teams of participants and teachers making door-to-door contact after the neighborhood has been informed (through the other subsystems) of these future visits.

All of the data from a (4.4) Contact News Media, (4.5) Contact Groups and (4.6) Contact Individuals are sent to the (4.7) Follow-Up Inquiries subsystem. This subsystem requires the planner to indicate the manner by which inquiries will be handled. The entire effort of the preceding subsystems was to produce resources and participants for the program. Unless these inquiries are followed up in a carefully organized method, all efforts will have been fruitless. In fact, it is at the follow-up function that local programs most often fail. The reader is referred to the sample narrative to discover how one system has organized or will organize the functional requirements of the (4.7) Follow-Up Inquiries. Some of the follow-up activities serve to bring the participant to active participation within the program. This is indicated by the signal path to (5.1.1) Welcome To Center/Classroom.

(4.8) Evaluate Campaign is the last function within the entire (4.0) subsystem. It requires an investigation of all promotion activities to determine the effectiveness of the effort. Effective techniques need to be identified and stored for subsequent use. This subsystem requires the planner to identify how he will evaluate the program promotion activity and what he will do with his data. He can best do this by determining the extent to which his (4.2) informational goals have been met. If you expect to bring 40 new students into the program as a result of media contact, were you able to do so? The degree to which new students are brought into the program will, more than likely, affect your (3.7) program management objectives. One promotional campaign added 14 deaf participants to the program and no provisions had been planned for such learners. The planner had to go through a recycle for these students and make some changes at the (3.7) Formulate Program Management Objectives. Later, when the planner reaches (5.1.4) Determine Referral Sources, he will have information available for this (4.8) Evaluate Campaign subsystem, which will assist in determining promotional effectiveness.

The planner must be encouraged to perform the (4.0) PROMOTE PROGRAM task several times during the year. He can use the entire

subsystem to plan a promotional program for one geographic area while not using it in others. In fact, if staff and local talent are available, it may be necessary to continuously recycle various subsystems within (4.0) PROMOTE PROGRAM.

The discussion regarding (4.0) has not covered every function to the same extent. The planner must be aware that the major task needed to develop a narrative is to provide complete information in terms of process, techniques, and quantitative data.

The important relationship in the (4.0) PROMOTE PROGRAM subsystem is the external feed paths from (4.8) Evaluate Campaign to (3.7) Promote Program Management Objectives. The reason for such a feedback has been previously discussed.

We have arrived at a subsystem that is functionally performed by the faculty and will be discussed later. But even here in (5.0) APPLY ENROLLMENT PROCEDURE and (6.0) PLAN AND CONDUCT PROGRAM, the planner still has the obligation to insure that the functions are clearly described. In fact, the description of these functions will serve as a necessary training tool for newly entering faculty and staff.

6.0 PLAN AND CONDUCT PROGRAM

With (6.0) PLAN AND CONDUCT PROGRAM there are two subsystems which are the functional tasks of the planner. They are (6.4) Operate Logistics Support and (6.5) Analyze Hardware/Software.

(6.4) Operate Logistics Support allows the planner an approach to handling, providing, and producing appropriate hardware and software. For our purposes, hardware is synonymous with equipment and software with content. In other words, a teaching machine is hardware, but the program materials used with the machine are considered software. Only a brief examination of this subsystem seems necessary. In (6.4.2) Handle Consumables the planner needs to establish criteria for classifying materials. (6.4.2.2) Store, (6.4.2.3) Control Inventory, and (6.4.2.4) Issue indicate the tasks required for handling any material classified as a consumable product, such as worksheets or workbooks. The planner should identify a member of the staff who will be responsible for the entire (6.4) Operate Logistics Support function and charge this individual with the task of identifying the elements of each function within the subsystem.

There are some instances when locally produced materials are needed. In such a case the (6.4.1) Reproduce Consumables subsystem is employed and elements and procedures necessary for invoking the functional requirement of this subsystem identified.

(6.4.3) Provide Hardware Support requires establishing a process by which faculty and staff can: check out hardware in the (6.4.3.3) Issue

function; (6.4.3.1) Procure the necessary hardware; and (6.4.3.2) Maintain the hardware in usable condition.

The entire (6.4) Operate Logistics Support subsystem is influenced by two other subsystems, which are (6.3.2) Conduct Center Instruction and (6.3.3) Conduct Classroom Instruction. Signal paths from these last two subsystems indicate the manner of and reason for such an influence. Most system planners have found that a secretary or paraprofessional is able to meet the functional requirements of (6.4) Operate Logistics Support once it has been structured and procedures are established.

(6.5) Analyze Hardware/Software was developed to answer requests by planners for a process or system by which they could evaluate materials and hardware. All too often, they are subjected to material acquisition through salesman pressure, with no method of evaluating such purchases. We feel that this subsystem has immediate value to any state developing a dissemination system.

(6.5.1) Identify/Obtain Materials is the first step in evaluating materials. It is influenced by the requirements of (6.3) Develop Individual Plans Of Study in general and by (6.3.1) Create Plan in particular. The objectives identified in (3.7) Formulate Program Management Objectives also influence the type of hardware and software to be acquired. Signal paths indicate such influences. There are four subsystems that can be used in identification and obtaining materials. The planner can use one or all as he sees fit. He must, however, indicate to any subordinate which should be used. In the Southeast, the evaluator can use the Southern Regional Education Board's dissemination project or the National Multimedia Center as sources (6.5.1.1) or he can obtain samples from the publisher (6.5.1.3); or examine the list of approved materials issued by the state department (6.5.1.2); or he can get leads from individuals at conferences and from users within the program itself (6.5.1.4). The author suggests that the reader use each subsystem to identify materials and employ cross-reference procedures.

The planner is required to identify the procedure necessary to accomplish the (6.4.1) Identify/Obtain materials function and to make it available to any person assigned an evaluator's role. Any acquired materials can be stored in a section of the filing system devoted to this function. All of the information, samples, and materials from this subsystem are fed into (6.5.2) Determine Appropriateness. This model proposes two methods for determining appropriateness of materials: (6.5.2.1) Determine Validity and (6.5.2.2) Determine Reliability. If, he wishes the evaluator may determine face validity according to a checklist supplied by West Georgia College, a simple yes and no criteria list. If the material has high face validity, then content validity is determined. The evaluator performs all three of the

functions within this (6.5.2.1.2) subsystem. All lists, instruments and data are stored in the appropriate subsystem to enable sequential analyses.

All results are subjected to (6.5.2.2) Determine Reliability. The planner is required to indicate here what methods he will use to check reliability. This function is difficult to perform in many cases since accurate reliability figures are generally not readily available for material in the field of adult education.

After the evaluator or planner has performed all of these functions, he should have a basis for (6.5.3) Decide Procurement. A signal path indicates that any decision is passed on to (6.4) Operate Logistics Support for further processing. This entire subsystem takes a great amount of initial work and identification. Once it is established it needs only to be subjected to minor revisions. Important relationships for the entire (6.0) subsystem will be reviewed in the forthcoming section devoted to faculty tasks.

7.0 RECRUIT AND SELECT FACULTY

This subsystem comes under the rubric of staff development. It was developed, along with the supportive (8.0) TRAIN FACULTY subsystem, to provide coordinators and planners of adult programs a staff development process.

The recruitment and selection of faculty, both professional and paraprofessional, have come under constructive criticism in Georgia during the recent years. Coordinators, the experienced successful teachers, and state staff have begun to request more careful recruitment and selection of potential teachers. In the past any person with certain minimum professional qualifications who could organize a class with a sufficient ADA would be employed. This appears to have been the main qualifier of employment and certainly is a negative response to use of ADA for budgeting and employment. While the new funding formula will take some pressure away from total budget commitment to the ADA formula, the problem of employing success oriented teachers remains. The new budgeting formula and certification standards now under examination will aid the employer in being more selective.

Recruitment and faculty selection need to be subjected to a systematic analysis. The inclusion of this subsystem is an attempt to provide some direction at meeting this need and was included at the request of the teachers and coordinators who participated in developing the prototype of the present model. It is concerned with establishing selection criteria as well as describing the process by which teachers may be recruited and assigned. It is also a precursor of training needs, a problem which will be discussed in the next subsystem.

The main task of the (7.0) subsystem is in identifying components of (7.4) Establish Teacher-Paraprofessional Selection Criteria. It provides a base for all other functions. In (7.4.1) Identify Academic Requirements such considerations as certification, training, cognate backgrounds must be delineated and recorded. If the planner needs to waive certain academic requirements, as is often the case for teachers of machine shop, auto mechanics, and masonry, then a clear explanation of such an action needs to be recorded. The same applies to (7.4.2) Identify Experience Requirements. The planner must describe the elements of experience requirements and record them in this subsystem. If certain tradesmen are to be employed, then an experience spectrum is identified.

(7.4.3) Identify Personality Characteristics is surrounded by much controversy. The limitations of this publication prohibit a discussion of favorable personality characteristics to be considered in selecting teachers. The best way to meet the needs of this function is through the use of criteria identified by a group of experienced teachers selected by their peers. Lists of such criteria are also available in any education text devoted to curriculum personality inventories and the like. The actual compilation of characteristics, however, is not as important as the final selection. In other words, make a selection that best suits your program and make this selection known to present or prospective employees. The sample narrative indicates that there are also de-selective characteristics. Some teachers don't wish to work with Level One learners, or with people who come from low socioeconomic backgrounds. One coordinator has found it useful to provide a de-selection list of characteristics within this function.

The planner is ready to begin with (7.1) Decide Number Of Teachers Needed and (7.2) Decide Number Of Paraprofessionals Needed, according to specific types of program needs and objectives identified in (3.7) Formulate Program Management Objectives. Upon examination of these two subsystems, the planner is ready to (7.3) Advertise Personnel Needs, using local paper, public school faculty meetings, and announcements during pre-school planning sessions. The planner cannot simply plan to use former adult education teachers or to restrict himself to public school teachers. In fact, he should seek out the housewife marketplace. The use of public school teachers is subject to much criticism because of fatigue factors, availability, outside professional obligations, and other concerns. Our society has trained people who could well serve the adult education program as their chief professional obligations, and other concerns. Such a parttime person usually devotes far more time to his efforts than the practicing professional who teaches full time.

All teacher candidates who respond to advertising efforts are screened by the criteria listed in (7.4) and are selected for interview (7.6). Some administrators use a committee for performing this function, and others do

prefer to interview candidates personally. Regardless of how this interviewing is to be conducted, the process should be recorded in this subsystem. If an interview schedule is to be used, store it here.

Following the interview, candidates are selected or rejected (7.7). Again the criteria in (7.4) are used as selection or de-selection standards. There is a feedback signal path from this subsystem to (7.9) Modify Criteria, enabling the planner to make adaption in the criteria established in (7.4) or to add new criteria as they occur in the de-selection process. An example of such a modification would be selecting a 68-year-old teacher because of special ability even though a 65 age limit had been set as one criterion.

The last function to be performed, (7.8) Assign Faculty, is a multiple one. Not only does the coordinator assign the employee to a teaching location or position in (7.8.1) Assign To Teaching but he also assigns the employee to a training program (7.8.2). An example of this is assigning the paraprofessional to on-the-job training or the reading teacher to learning lab training.

There are two important relationships that need to be discussed for the (7.0) subsystem. The (7.8.2) Assign To Training Program signal path to (8.1) Establish Learning Objectives is important since the people being assigned to training will require a specific type of training which will dictate the learning objective of a training program. The criteria stored in (7.4) Establish Teacher-Paraprofessional Selection Criteria become evaluative criteria in (9.1.3) Evaluate Staff in general and in (9.1.3.1) Determine Task Performance in particular.

8.0 TRAIN FACULTY

(8.0) Train Faculty is the second of the two subsystems devoted to establishing a staff procurement and development process. It is formulated on the concept that program objectives (3.7) and faculty requirements (2.3.4) dictate training needs to be met. It seeks to provide for terminal and on-going training considerations and to make maximum use of local and outside training resources. It is predicated on the notion that any educational endeavor requires planned as well as self-renewal activities and that the best determinants of such activities are the program needs. Staff development in Georgia has not received a continuous planning approach from local staffs. Seminars, one-day conferences and summer institutes have been used mainly by the state department staff. This subsystem seeks to allow the local staffs a role in staff development at local as well as at state levels, since local training programs will be consolidated into an overall state plan.

The objectives identified in (3.7) Formulate Program Management Objectives are fed forward to the (8.0) TRAIN FACULTY for one reason.

They set training needs by indicating priorities and program directions, and they serve as evaluation criteria. A serious training need has to be met if one of these objectives calls for operating a learning lab and no such educational activity has ever taken place. (2.3.4) Establish Faculty Requirements also will dictate training activities for the same reason as the program management objectives. The characteristics of the faculty assigned to training will guide the trainer in establishing training patterns. While there is no signal path from (6.0) PLAN AND CONDUCT PROGRAM to the training functions, there are some patently clear training obligations, for example, when the use of new learning materials requires training. The implication is that the training program will be supportive of all activities in the total program, and the trainer must examine every facet of the program before establishing the training procedures and content.

Consideration of all functions recognized above is needed before the person assigned to faculty training can (8.1) Establish Learning Objectives. These objectives are at management levels, not specific behavioral levels, and serve not only to establish training goals but also as benchmark evaluation criteria. (8.1) Establish Learning Objectives is made during training to meet the proper management learning objectives. An example of a management training objective is: to provide on-the-job training for six paraprofessionals with weekly two-hour seminars. Such an objective is directive, establishes cost factors, and describes the type of training and the persons involved in such training.

After learning objectives are established, the planner or designated trainer should (8.2) Determine Inservice Training approaches. It will be the task of the trainer to identify which he shall use, how they shall be related to each other, how they are supportive, and where and when they shall occur. Participation in (8.2.4) Determine Institute should be logically followed by another form of training, perhaps (8.2.5) On-The-Job Training. All training decisions are to be identified within this subsystem, and the decisions stored here. It is not enough for the trainer to simply say, "We will conduct a seminar." This statement has no meaning in terms of costs, scheduling, time sequence, or even content.

(8.3) Selection of Training Staff is usually dependent upon the type of training to be held. If (8.2.1) Graduate Courses are selected, then a (8.3.1) College Consultant is the typical trainer. What is required is the identification of such a trainer, the time he is to work, and cost obligations. The two signal paths here indicate information exchange and provide two types of information input. First, one identifies who will do the training according to training needs. Second, a college course may be selected as a training tool, but contact with (8.3) Select Training Staff might reveal that no trainer is available at selected times, or that the expertise for particular content is not available. This may necessitate a change in the training

program itself. Coordinators have experienced the frustration of selecting a training approach and then not being able to find staff. This interrelationship between the two systems will prohibit such a crisis. Further ramifications may be found in (8.0) TRAIN FACULTY section of the sample narrative.

(8.4) Conduct Training Program requires the planner to begin the training, based upon the determinations made in the previous subsystem. Teachers who have been assigned to training in (7.8.2) Assign to Training Program begin here. The signal path from (8.4) Conduct Training Program to (5.0) APPLY ENROLLMENT PROCEDURE has been provided to assign those teachers who have been through training.

(8.5) Evaluate Program is subject to the objectives fed forward from (8.1) Establish Learning Objectives, which serve as evaluation criteria. The results of the evaluation are also fed back to (8.2) Determine Inservice Training and (8.3) Select Training Staff. The purpose of this feedback is to determine the effectiveness of the staff or training in meeting learning objectives. Results or findings should be stored in (8.5) Evaluate Program for further planning reference. Another reason for evaluating the program is to (7.9) Modify Criteria used in (7.6) Recruit and Select Faculty. For instance, the training may reveal that teachers should be skilled in counseling young adults in job training. This information will need to be added to (7.0). The results and findings of the training program evaluation will also need to be fed forward to (9.1.2.3) Consider Training so that teachers may be evaluated on their performance.

9.0 CONDUCT TERMINAL EVALUATION

This is the last subsystem but could be considered the first, since terminal evaluation makes way for the planner to begin the second cycle of planning, that is, going through the model again. While the model requires constant evaluation as each function is performed, a need for a final analysis exists. Not only will this subsystem provide input into further planning cycles but it enables the planner to make a final review for future program justifications and for annual reports. The expression, terminal evaluation, was used to indicate a summary nature, as opposed to the constant, predictive nature of evaluation required throughout performance of functions. This subsystem serves as the repository for all accumulated data needed to make long-range plans. It is, in no small way, a reflection of the need expressed by developers of the initial model to have some systematic process and standard by which all local programs in the state can be commonly evaluated and results universally interpreted.

In (9.0) CONDUCT TERMINAL EVALUATION there are seven feedforward signal paths which indicate that results, decisions, and information are sent from preceding subsystems to the various functions. We have discussed these signal paths throughout our review of the model. One example will suffice. There is a multiple signal path from (3.7) Formulate Program Management Objectives to the following subsystems:

(9.1.1.1) Interview and Evaluate Client
(9.1.2.1) Determine Task Performance
(9.1.3.3) Consider Recruitment And Retention

In substance, such feedforward signals indicate that the objectives from the originating subsystem must be sent forward to provide an index for subsequent evaluation. If one program management objective calls for all staff members to recruit 30 new learners every three months, then the staff needs to be evaluated by the extent to which that objective was met in (9.1.1.3) Consider Recruitment And Retention.

The feedback signal paths reveal where evaluation findings need to be considered in previous subsystems so that necessary changes can be made. These signal paths are directive in the following manner:

1. They enable determination of the effectiveness to which a function is being performed.
2. They allow the storage of information for future decision making without elaborate searches.
3. They provide manipulative data.

The planner needs to remember that the results of any evaluation are worthless unless they can be applied to program concerns and functions. These signal paths provide direction in making such applications. They also tell the planner that he has a systematic process for making changes in a rational fashion.

The planner is advised, once again, that he himself does not have sufficient time to complete all of the functions in the entire (9.0) subsystem. He will have to organize an evaluation team to perform many tasks. The sample narrative describes how one program did this.

(9.1) Conduct Internal Evaluation is concerned with the evaluation process as it is conducted and organized by the local program staff and faculty. In (9.1.1) Evaluate Learners all learners' folders are examined (or perhaps a sample of folders) to determine the effectiveness of instruction and learning activities. This subsystem identifies four functions that will provide an index of such an evaluation. Results from performing these four functions must be stored and analyzed.

In the case of (9.1.1.1) Interview And Evaluate Client, an interview schedule or procedure must be developed and stored. This subsystem fosters non-quantitative evaluation and allows one to gather student

impressions, suggestions, and recommendations. It does not restrict the learner evaluation to total dependency upon printed materials and objective data. It is an attempt to introduce the subjective into the evaluation process.

(9.1) internal evalution must also provide for an examination of (9.1.2) teacher performance. Data from (9.1.1) are fed into this subsystem to aid in such an evaluation in terms of learner achievement since this is one obvious measurement of teaching effectiveness. Of the four subsystems in (9.1.2) Evaluate Teacher, (9.1.2.4) Consider Retention seems to be most important to all coordinators. The planner needs to know dropout data as another measure of teaching effectiveness because of the commonly held belief that a teacher who "keeps" learners in learning situations seems to be most effective. Naturally no teacher wishes to be evaluated upon the basis of one single criterion so others have been developed. In (9.1.2.1) Determine Task Performance a listing of those tasks by which the teachers will be evaluated and the manner in which they will be evaluated must be developed. The teacher must be made aware of the entire process. An example of one such task would be to require all teachers to keep a complete folder on each learner.

(9.1.3) Evaluate Staff is the other function that must be performed during the internal evaluation. Once again, the planner must accurately describe the components of each function and the process by which performance will be measured. If a staff member is required to prepare two radio announcements, then in (9.1.3) Determine Task Performance he must be evaluated to determine his performance of such a task.

(9.2) Conduct External Evaluation is another function which grew from the need of the local coordinators and teachers during the development of the first model. Without exception, each wanted "outside" people to come and look at their program, make suggestions, and offer solutions. This subsystem requires an outside team to be developed to conduct an external evaluation and identifies the composition of such a team. The user of the model should indicate how the team is to be formed and provide the team with all of data accumulated in the (9.1) Conduct Internal Evaluation. The Adult Education Department of the University of Georgia has developed a terminal evaluation form which may be employed in (9.2.2) Apply Terminal Evaluation Form.

All of the data from the internal and external evaluation are forwarded to (9.3) Prepare Terminal Report. It is suggested that the planner identify the person or persons responsible for developing such a report within this subsystem. The final report is circulated according to three signal paths. It is sent to:

1. (1.2.3) Prepare Operational Plan for analysis and future consideration.
2. (1.3.4) Review Plan By Local Authorities in charge of the entire program.
3. (3.7) Formulate Program Management Objectives to provide data for determining the degree to which these objectives have been met or need to be modified.

One group of coordinators has requested that such reports also be sent to other coordinators to serve as a planning tool in their efforts to develop programs. Any additional signal paths for the final report may be developed as the planner wishes.

FOR FACULTY AND TEACHING STAFF

The previous pages have been concerned with discussing the model, its functional aspects and requirements as they relate to supervisory, planning, and administrative staff. This section will review those portions of the model which are the responsibility of the faculty and other teaching staff. By separating the discussion into two sections, the planner may also be able to use this section as a training tool and establish a systematic planning and performance procedure for teachers. One planner intends to issue this portion of the discussion to all teachers to serve as a planning and performance guide.

This section will examine the (5.0) APPLY ENROLLMENT PROCEDURE and the following subsystem in (6.0) PLAN AND CONDUCT PROGRAM: (6.1) Test Client; (6.2) Identify Client's Immediate Educational Needs; and (6.3) Develop Individual Plan Of Study. During the following pages the reader is again asked to refer to the flow chart. It will also be helpful to examine the portions of the sample narrative which deal with these subsystems. Of special value will be the description of one teacher's use of the model to develop a study plan for two different students. Since the two subsystems to be discussed were developed for classroom and learning lab teachers, we will focus on the participant and allow the reader to transpose the discussion to the teaching situation within which he works.

5.0 APPLY ENROLLMENT PROCEDURE

This subsystem is organized to provide both the experienced and inexperienced teacher with a step-by-step process for enrolling a student. It is to be applied to both new and returning students.

The first step in enrolling a student is to interview him (5.1). Upon his arrival he should be immediately greeted and welcomed (5.1.1). It would be helpful for the teacher to establish for his own use a procedure for doing this. This seems especially applicable to the classroom teacher who may be in the midst of a class presentation. A student could also perform this function. Since most adult learners are somewhat apprehensive about returning to a learning situation, a teacher must seek to welcome the student quickly and warmly. As soon as it is possible, the teacher should sit down with the participant to (5.1.2) Fill Out Personal Data Sheet. This activity will immediately give the student something to do. After providing instruction in filling out the sheet, the teacher should observe the student. If he has difficulty, there is a good possibility that he is a Level One learner and the teacher can then proceed with a different pattern in (5.2.1) Explain Purpose Of Materials. The teacher should also attempt to (5.1.3) Determine The Educational Level Of The Student, so that he may show the learner appropriate materials at a later time. All teachers are asked to (5.1.4) Determine Referral Source so as to enable the coordinator to evaluate his program promotion efforts. In many cases the personal data sheet may request this information. Each teacher is also requested to discuss with the student his (5.1.5) Personal Goals and record these goals for later referral.

The second function in (5.0) APPLY ENROLLMENT PROCEDURE is to introduce the learner to the center or classroom (5.2). When the teacher explains the purpose of materials (5.2.1), care should be taken to use materials that approximate the learner's educational level as determined in (5.1.3) Determine Education Level. The teacher will then be prepared to perform the remaining functions in this subsystem, which can be done in about fifteen minutes. This estimate will differ from teacher to teacher. This entire subsystem was developed to make the student feel welcome and wanted and to provide guidance to the teacher in accomplishing this task.

6.0 PLAN AND CONDUCT PROGRAM

This subsystem includes the process by which a student is tested, his needs identified, and his program of study developed. The sequence of activity is important, and the teacher should seek to adhere to this sequence as closely as possible.

(6.1) Test Client is the first function that must be performed. (6.1.1) Purpose of Testing is explained to the student. While there are many approaches to such an explanation, every indication leads us to believe that a simple straight forward statement is best: the testing is being used to help the teacher find the right kind of learning materials to help the student meet his goals. Some teachers explain to students that the testing is not a grading

process. In any case, do not offer any elaborate explanation for testing as a replacement for a simple and honest statement.

(6.1.2) Administer Formal Tests is the next step in testing. There are two types of tests used, and these are usually prescribed by the program coordinator. If he has not already done so, he should be requested to prepare the testing approach for the program. Some programs (6.1.2.1) Administer Standardized Tests to determine educational level and follow up such a test with (6.1.2.2) Administer Publishers' Test to provide actual placement in the material. The tests that are to be used to perform both of these functions must be clearly identified and stored in the appropriate subsystem.

Following the testing the teacher will (6.1.3) Score And Analyze Tests, the results of which will be used in two subsequent functions: (6.2) Identify Clients' Immediate Educational Needs and (6.3.1) Create Plan.

Before any program of study can be established for the learner, his immediate needs must be determined (6.2). We have identified four major needs, but the planner or teacher may wish to add others more directly related to the program and its participants. If this is the case, then do so and identify and code the new subsystem.

Following the needs identification, the teacher has to (6.3) Develop An Individual Plan Of Study. The first step in this is to create an individual plan of study that will enable the learner to begin to meet his immediate needs. This function is performed in the (6.3.1) Create Plan subsystem. First, the teacher, using an analysis of the results from (6.1) Test Client, selects the grade level of instruction (6.3.1.1) in which the learner will be able to be successful. Next in consultation with the learner, he identifies individual learning objectives (6.3.1.2). Examples of learning objectives are: The learner will complete one workbook within three weeks; the learner will prepare for the GED exam.

The (6.3.7) Select Most Feasible Location function means that the learner and teacher select the learning site which best suits the learner. More times than not, such a selection is based on convenience factors. If there is only one learning location, this subsystem is bypassed. It should be noted that in most instances all of the functions previously discussed can be performed at one time or during the initial contact. This seems especially true in the case of learning centers.

There are two routes of instruction available to the learner in Georgia (and probably in most other states). His instruction can take place within the context of a classroom setting or at a learning center installation. The type of educational setting usually dictates the learning approaches. Even if this is not the case, since material usually available at learning labs can also be used in a classroom the teacher selects one of two planning routes: (6.3.2) Conduct Center Instruction was organized for use of learning lab

staff; while (6.3.3) Conduct Classroom Instruction was organized for use in traditional classrooms. The planner can refer to the sample narrative, which includes a step-by-step example of two students being processed through the model.

(6.3.2) Conduct Center Instruction has four functional requirements which are in sequence.

1. (6.3.2.1) Select Learning Laboratory where the instruction will take place.

2. (6.3.2.2) Select Hardware/Software which is to be used, and identify the hardware and software. An example is the use of the SLJ Instructo machine with the CCY programed materials for math. This task is to be performed for every content area and recorded in the learner's folder.

3. (6.3.2.4) Produce Client Learning Sequence and inform the learner of this sequence. This function requires a learning schedule with a sequence of learning events which needs to be accomplished. This sequence is also recorded in the learner's folder for use by other instructors or by the learner himself if he is self directive.

4. (6.3.2.4) Instruct And Test. It is strongly suggested that an early testing of learner progress be made so as to reschedule him if necessary. Most programed materials have built-in tests to monitor progress, but a teacher cannot wholly depend on these instruments. If (6.3.2.5) Monitor And Evaluate Progress discloses that the learner needs to be replaced in different materials, the teacher recycles the learner's plan into (6.3.2.2) Select Hardware/Software, as indicated by a feedback signal path.

(6.3.8) Counsel Client requires that the teacher keep in contact with the learner to insure that any problems which may arise can be dealt with. It does not imply that the teacher is to provide professional counseling services. If such a service is needed, then the teacher should make a referral. Any information obtained while counseling the learner should be placed in his folder as well as being fedback to (6.3.2.4) Instruct And Test for planning aid. Personal information must be handled with discretion and certainly need not be recorded in the folder.

(6.3.3) Conduct Classroom Instruction is somewhat different from learning laboratory instruction. The first task is to (6.3.3.1) Develop Course Outline to the teaching point level. An example of one teaching point is: Subtraction using the carrying principle will be covered during the first week in June. The teacher (6.3.3.2) prepares a lesson plan and places this in the learner's folder or stores it in this subsystem. (6.3.3) Select Instructional Materials using the process identified in (6.4) Operate Logistics Support is accomplished. Upon receipt of the learning materials from (6.4.2.4) Issue, the (6.3.3.4) Instruct function begins.

There is a digression in this system as is indicated by the signal path from (6.3.3.3) Select Instructional Materials to (6.3.6) Establish Test Criteria. Few traditional texts have appropriate testing points included in programed materials. The classroom teacher must develop his own tests or adapt other published tests. The teacher accomplished this task in the (6.3.5) Prepare Testing Schedule subsystem, which suggests three approaches to testing a learner using standard text materials. Teachers are expected to make the best possible fix of these three methods to insure accurate and constructive testing of learner progress. The testing approach should be recorded for future use. Following the preparation of a testing schedule, the teacher will (6.3.3.5) Administer Tests, again as soon as possible after the initial instruction takes place, and (6.3.3.6) Evaluate Client. The learner either continues on with his learning program, if he is working successfully, or the teacher cycles the learning sequence back to the point where a (6.3.3.2) Prepare Lesson Plan function is performed. The teacher should make every effort to keep a careful record of planning efforts and progress evaluation. A learner folder is the logical place for such information. While teachers are indestructible, it does occassionally happen that they can no longer continue to teach. There is nothing worse for the learner and new teacher than to find little directive information available.

A (6.3.4) Formulate Learning Psychology function has been included in the model to guide the teachers in the selection of those principles of learning which are more directively applicable to their experience, training, and teaching situations. The teacher is responsible for selection of the relationships between the various principles. An example of how one person accomplished this is recorded in the sample narrative.

SUMMARY

The bulk of the discussion in this entire section was devoted to administrators, planners, teachers and supervisory personnel. It sought to describe the purpose of each subsystem directly relevant to them and their job. The word *planner* was used as a synonym for these types of people since they are all responsible, in varying degrees, for planning. Concrete examples were offered whenever it seemed feasible to do so. If the reader were to remember only one thing about all that he has just read, it is that the successful model user is one that adapts the model when he finds points that do not refer to his program. Those planners who take issue with the process or components may merely adapt these subsystems to suit their programs. No model can be completely inclusive, but it is one conviction that this model is 95% frozen, or, in other words, has less that a 5% discrepancy in its attempt to represent reality in a graphic analog form. For

those readers needing further information or examples of an operational narrative, the sample narrative which follows this section will be most useful.

This rather extensive review of the model was intended to describe

1. the composition of the planning model,
2. relationships and functions in detail,
3. the type of information needed by planners who will use the model,
4. important relationships which were indicated through the use of signal paths,
5. actual use of the model in an on-going ABE program,
6. the planning process as used by teachers, and
7. the planning process as used by administrators.

There are specific points that need to be reviewed. The planner needs to assign responsibilities to his staff; the model is a way to do this in a systematic and identifiable manner. It is essential that the planner cycle through the model constantly. Planning is not an annual job. It is hoped that the planner understands that each subsystem can be examined and used independently. Finally, the planner needs to remember that a model is only as effective as the person using it. A flow chart is a simple way of showing planning relationships; and is in itself no sure indication of success.

A SAMPLE NARRATIVE

The following narration is a factual record of implementation of the model in one of the most successful adult education programs in Georgia. It is intended to demonstrate simulation in an actual planning situation—an urban-rural setting. Read the scenario first without referring to the model. The names used are fictitious.

SCENARIO

Name: Gribble-Spats Multi-County System
Cycle: 1971 - 1972
Geography: 9 counties
Total Population: 175,000
Students: 3,971
Administrative Staff: Coordinator, two assistant coordinators
Teachers: 82; 37 of these were experienced
Inservice Training: 4 productive meetings
Local Financial Support: $6,500 donated by local boards of education, churches, civic clubs, and communities
Learning Centers: Five successful centers in operation, another to start in September. These are full-time, usually storefront locations, open 12 hours a day; they provide individualized instruction with optimum use of programed materials. Both hardware (audio-visual equipment) and software (program content) are used in all centers. Centers provide an opportunity for all adults, regardless of working hours, to improve their education without the stigma of returning to a school where they have previously failed.
Blind Classes: Blind adults are given the opportunity to learn Braille in the adult education blind class. 14 learners took this class.
Industry Classes: Held in Billiday Mills and provide an opportunity for employees to receive adult education training at the job site.
Public Work Camps: ABE classes are held 2 nights a week, 3 hours a night, in 7 public work camps, for 306 inmates. This is another step toward rehabilitating offenders to be productive citizens.
Activities: Learners receive adult basic education instruction; special speakers visit classes occasionally; i.e., public health nurse, income tax representative, banker, technical school representatives. Learners visit educational sites.
Classes: 19 adult education day classes, 63 night classes.

Graduation Exercises: Each of the nine counties held a graduation at the end of May, signaling the conclusion of most of classes until September. Graduation speakers included the State Treasurer and a representative of the Georgia State Department of Education's Leadership Division. Students receiving ABE Certificates were 16 to 78 years of age.

Publicity: Numerous articles in local newspapers included four front-page stories and six full-page feature stories. Radio broadcasts were used to inform the public about the adult education program.

Cooperation with other agencies: Coordinator is program chairman for Inter-Agency Council. Adult Education, Family and Children Services, the Police Department, and 23 other agencies meet once a month to have a program and discuss how various agencies can help each other. Georgia Consumer Services Program provides legal aid, advice, counseling, etc., for ABE learners at no charge.

Implementation of the ABE program was clouded by several factors:

1. No accurate final budget estimates were obtainable.
2. Program was without a state director.
3. State reorganization plan was not in effect.
4. Status of the ABE program was not determined.

SIMULATION

With the scenario setting the stage, go through the simulation, referring to the model to see the subsystems and to trace relationships.

1.0 DEVELOP ABE PROGRAM

The Gribble-Spats Multi-County System (GSMCS) is already in existence. Therefore (1.1), (1.2), (1.3.1) and (1.3.2) are bypassed, and the planning team will enter the model at (1.3.3).

1.3.3 Develop Local Plan. The staff of GSMCS will be reorganized to reflect work load and experiences of 1971. Staff will consist of the following:

a. One ABE coordinator[4]
b. Two assistant ABE coordinators
c. One full-time secretary
d. Part-time teachers, as needed
e. Three learning center directors.

GSMCS will be divided into two administrative areas, with one Assistant Coordinator in charge of each area. Each Assistant Coordinator will be responsible for implementation of the model in each geographical area under direction of the Coordinator. Each Assistant Coordinator will direct a learning center in his area half-time. All five learning centers will be

operated at present staffing levels. The number of part-time teachers will be determined by the results of (4.0) PROMOTE PROGRAM, but every effort will be made to retain 23 teachers wishing re-employment. The local plan presently in effect will be adapted following inputs from the (3.0), (4.0) and (6.3) subsystems.

2.0 QUANTIFY OPERATING PARAMETERS

2.1 Identify Learner Population. Enrollment figures from last year were examined, and 150 student folders were selected for future reference. The 1970 census was examined to determine population distribution, level of education, work histories, etc. It is anticipated that over 5,000 clients may be in the program during FY 73, with profiles similar to clients in FY 72. 85% will require ABE work, while 15% will seek advanced level (including GED) preparation.

2.2 Establish Budget. The projected enrollment increase will require a budget allocation of $185,000. The final budget allocation is dependent upon federal legislation, and state officials have instructed all coordinators to begin operation at FY 71 budget levels ($136,000). This action will require restructuring of budget during the simulation.

2.3 Determine Resources. Actual counts of facilities, community resources, and staff were made.

(2.3.1) Identify Facilities And Equipment. An inventory of all present facilities and equipment was made. Two storefront learning centers will be lost because of expired leases. Both leases cost $1.00/year. Unless similar sites can be found, budget restrictions may prohibit their operation. The coordinator will seek new sites or re-budget as needed. Equipment on hand is adequate, and supplemental purchases made in FY 72 will eliminate the need for any increase in purchases.

(2.3.2) Identify Community Resources. The coordinator reviewed the community resource inventory made in 1971, contacted five churches and three civic clubs to aid in relocating the two learning centers. As a result of a favorable news story (4.0) about Learning Center #1, the owner of the store front has renewed the lease. One civic club has donated enough money to lease Learning Center #2 at no extra cost to the project.

(2.3.3) Establish Staff Requirements. Staff requirements will be maintained as identified in (1.2.3).

(2.3.4) Establish Faculty Requirements. It is anticipated that 82 part-time teachers will be needed but the final total will be determined upon examination of the (6.0) subsystem.

2.4 Evaluate Parameters

a. $185,000
b. Census reveals 20,000 people with less than 12 grades of education.
c. 45% of students available after 4:00 p.m.
d. 95% of potential teachers available after 4:00 p.m.
e. 80% usable community facilities available only after 4:00 p.m.
f. 85 school classrooms available after 6:00 p.m. 3 church buildings, 7 correctional institutions, and one business and industry worksite available.
g. 12 students needed to conduct one class.
h. $6,500 donations.

2.5 Modify Parameter Values

a. Industries requesting on-the-job training prior to 4:00 p.m. will defray cost of teachers; no minimum attendance required.
b. Majority of teaching effort will be in learning centers; teachers with poor ADA in FY 71 will be required to participate in (4.0) activities.
c. 3 teachers volunteer free services, enabling hiring of additional teachers if needed; no minimum ADA.
d. New learning center needed for Folley. Free store space identified in (2.3.2) is available and 2 classroom teachers will be assigned from night classroom; provide training in (8.0).

All data from (2.5) were fed back to (2.3.4) and an administrative decision made to decrease paid faculty by one.

Important Relationships (2.0)

From (9.1.3.2) to (2.5) Data will be fed back to enable further identification of resources when (9.1) is completed.

From (6.3.2.3) to (2.2)

From (6.3.2.4) to (2.3) The number of students in the actual learning situation determines budget and faculty requirements. The 1:12 ratio will be held in all instances.

From (2.3) to (2.2) Information in (2.3) needs to be fed back to (2.2). No signal path; add path for purposes of simulation.[5]

From (2.3.4) to (8.1) Staffing requirements will determine type of training; new teachers' orientation by September 3; contact college consultant for (8.3.1) planning by August 10.

3.0 IDENTIFY PROGRAM NEEDS

In order to develop a relevant and successful program, needs of the various people involved in the program must be identified. Obtain data from the four subsystems in (2.3), using the program parameter data identified in (2.4) as a decision filter.

3.1 Identify Student's Needs—Program Level

(3.1.1) to (3.1.2) to (3.1.3) A questionnaire was developed in July and 100 copies mailed to all former students. 50 students were randomly selected for oral interviews. 3,000 forms were to be sent to homes by students in public schools. All data were compiled.

(3.1.4) Modify Inventory. Three questions were ambiguous in the original form. Inventory was modified and a follow-up mailing of 200 to sample was made in the first week of September; following the closed loop (3.1.3) to (3.1.4) and (3.1.2) to (3.1.3).

3.2 Obtain Teachers' Recommendations. The coordinator called a meeting in early August of 5 experienced and 5 prospective new teachers to determine perception of student needs in terms of instruction and personal learning characteristics. Teachers attending West Georgia Institute were polled. Recommendations:

a. Students need individualized instruction.
b. Place emphasis upon career education and consumer education.
c. More pre-GED work is needed.
d. Students need experiences in social skills.
e. Seek active participants from lower socioeconomic groups.
f. Students need to be more successful with materials.
g. Learning centers need a student intake process.
h. Evaluation of material needs must be organized.

3.3 Obtain Consultant Recommendations. The Region I ABE consultant, 3 college consultants, and 5 local subject-matter teachers were involved in late July. Recommendations:

a. Program should emphasize use of local resources for clients.
b. Reading materials must be of high interest nature.
c. Learning center must provide core diagnostic plan.
d. Inservice training for use of new materials should be planned; route to (3.1).

3.4 Identify Societal Needs. Advisory committee was polled to determine perception of needs. Recommendations:

a. Provide on-the-job training in reading measurements at dress factory.
b. Some church groups used Bible reading.
c. Students need to be aware of available government services.
d. Voting in November requires knowledge of political process.

3.5 Rank Order Into Priority List. All data from (3.1.3), (3.2), (3.3) and (3.4) were compiled and ranked by ad hoc group.

3.6 Select Specific Needs To Attack. Ranked list from (3.5) was reviewed and the following decisions were made:

a. A majority of people will need and want intermittent education during daytime hours. Lack of available staff indicates that learning centers are required and will be given top priority. Agree to Johnson daytime store as a storefront learning center. Coordinator identified four sites for learning centers (2.1.2). A local church offers one site rent free, budget pays for two and Putaroy group in (2.3.2) offers grant to pay rental on fourth site. Three sites have been previously funded in FY 71; input into budget (2.2) was made.
b. Business and industry will require classes on site; programs given low priority except those providing funds for teachers.
c. Requests for career education programs are referred to the Area Technical School (ATS) for screening and planning. Students not meeting ATS qualifications will be given remedial instruction at learning centers and classes located contiguous to homes.
d. Requests for consumer education training are referred to local consumer education projects for further planning.
e. Request for Braille classes are delayed until a new instructor is found.
f. Needs for locally produced materials in form of series are referred to West Georgia College due to absence of expertise, manpower, and time.
g. Student requests for purchase of Bibles have been denied but problem will be referred to (4.5.2) for help.
h. Request by some students for payments to attend classes will not be honored due to policies in (1.1.1).
i. Education at correctional camps to be continued.
j. Decisions from superintendents and state officials assign political education low priority.

3.7 Formulate Program Management Objectives. Second ad hoc group, chaired by assistant coordinator, was formed after (3.6) to develop management objectives. Examples of objectives are:

a. All learning centers will develop individual learner contracts; each contract will state goals to be achieved, with a timetable.
b. Work camp programs will foster career education based on career leader concept.
c. Program promotion will tie into 7 specific program targets.

Important Relationships (3.0)

From (3.7) to (8.1)

From (3.7) to (6.5.1.)

From (3.7) to (9.1.1.1) Management objectives (3.7) will be used to determine faculty training (8.1), selection of hardware/software (6.5.1), and to determine the degree to which they have been met (9.1.1.1).

From (9.3.4) back to (3.7) Evaluation must feed data back to enable modification of objectives as well as determination of effectiveness.

4.0 PROMOTE PROGRAM

Promotion takes place in two stages. The first precedes (6.0) PLAN AND CONDUCT PROGRAM, to acquire client input and community commitment. The second seeks continuous input of clients and commitment. During initial contact, students select their learning locations usually on the basis of proximity. Students desiring day classes attend learning centers unless a special class can be formed.

4.1 Develop Uniform Information Policies. This task was completed in 1970 and the only modification was to assign coordination duties to the assistant coordinator having a background in recruitment and retention—a plus factor. All promotional materials were examined on the basis of (3.7) objectives. One effort was restructured because information was misleading and inaccurate.

4.2 Select Information Goals. Goals were general in nature, and included:

a. Provide service to community by educating its citizenry.
b. Individual plans of study used for each adult.
c. Program is available to all citizens with less than twelve grades of education without cost.
d. Program will increase personal communication skills.
e. All information material will stress drop-in nature of program.
f. Concentrate on learning center activities.

Reorganization of the state program occurred in the last week in July. While developing (4.2), a directive substantially cutting the budget allocation was received. Before reorganizing (2.2), negotiations produced the following actions.

(1.3.3) Design Local Plan. The plan, attendance data, and flow chart were resubmitted; (1.2.3) to (1.2.5); agreement made in (1.2.5) to continue at FY 71 levels. Adapted plan was returned from (1.2.5) to (1.3.3). Coordinator examined the plan and made the following adaptions for implementation in (2.5) and input to (2.2).

a. No teachers would be paid until ADA reached 14.[6] Potential faculty in (7.5) were informed of this decision and invited to participate in (4.6). This decision was placed in (2.3.4) as a faculty requirement. Recruitment in (7.0) was necessary.

b. New materials orders were to be held until forecast of student input was made in (4.6) and (4.7).
c. No capital funds were expended.
d. Temporarily closed Pompey Learning Center until the activity in (4.0) would provide sufficient clients.
e. Did not open new Learning Center until (4.0) revealed sufficient ADA to enable operation. Notification of modifications in (1.3.3) was sent to (1.2.3).

4.3 Produce Promotional Materials. Each teacher already employed was asked to design one program promotion and submit a sample of material. Three media packages were developed for distribution to (4.4), (4.5), and (4.6). Training in use of packages was to be undertaken in (8.0). One package was acquired from the state department.

4.4 Contact News Media. Two units were used in the following fashion. The first, a presentation produced by Morehead State University, was distributed for release two weeks prior to inception of (5.0), during first week in September. This was to develop interest in enrollment. No television was available. The second serving the same purpose was distributed in daily segments to three local newspapers.

4.5 Contact Groups. Staff members used the second media package to make personal contact with all subsystems in (4.5). This package was both promotional and commitment seeking. Follow-up of commitments was made by the coordinator in (4.7). There were seven; see (2.3.2) and (3.6) for types of commitments.

4.6 Contact Individuals. This function was performed primarily during the last week of August.

(4.6.1) Communicate By Telephone. Each staff and faculty member was asked to contact 25 potential clients by phone, and those showing interest were followed up the next day (4.6.4) and asked to recommend possible learners.

(4.6.2) Communicate Through ABE Students. No classes were in session. Teachers phoned former students to seek re-enrollment and ask leads. Students used in (3.1.l) also were polled.

(4.6.3) Communicate Through Public School Students—Person responsible for this function left the program, and it was by passed.

(4.6.4) Communicate Door-To-Door. 21 teachers volunteered to make a minimum of 25 door-to-door contacts. During development of (4.0), both assistant coordinators spent 2 hours a day in this function. Each positive contact was asked to recommend a friend.

4.7 Follow-Up Inquiries. All inquiries were processed on the spot and enrollment dates set. Subsequent inquiries resulting from (4.4) and (4.5)

both assistant coordinators spent 2 hours a day in this function. Each positive contact was asked to recommend a friend.

4.7 Follow-Up Inquiries. All inquiries were processed on the spot and enrollment dates set. Subsequent inquiries resulting from (4.4) and (4.5) were processed by the secretary and the files assigned to a staff member. Each inquiry was followed up within 2 days. 3 days prior to enrollment, contact was made by a staff or faculty member, and 3 days after a "no show," another contact was made.

4.8 Evaluate Campaign. The number of inquiries stimulated by various contacts were:

(4.4.2) radio=23 (4.4.3) newspaper=37
(4.5.2) religious groups=12
(4.5.6) educational systems=24 (local high schools)
(4.6.1) telephone=27 (4.6.2) ABE students=123
(4.6.4) door-to-door=338

Telephone contact (4.6.1) was difficult and student acquisition almost impossible. It will be used in the next cycle to make an initial survey of interest and student contact. Model should have recruitment system in (4.6.2) at the end of the fiscal year to enable better coverage in the next fiscal year. (4.6.3) was never performed. One assistant coordinator will develop a form for distribution on January 17 and September 8, 1973. (4.6.4) was most effective but teachers desire training on how to conduct door-to-door recruiting. Information sent to (8.1).

Only 5% of students were obtained by contacting groups (4.5). Staff of 6 a limiting factor. Must develop a plan using volunteers, teachers, and students for contacting groups. One teacher will head up ad hoc group to report in late December.

Contact with news media (4.4) was normal and inquiries at usual level. Continue media use in October and November. Staff felt a continuous operation is needed in addition to the concerted peak effort. Ad hoc group in (4.5) will investigate this possibility.

Important Relationships (4.0)

It was determined that a new signal path was needed from (4.8) to (8.1) in order to make necessary adaptions in training. See comment in (4.8). Nine classes failed to preregister sufficient students to permit a class. Seven faculty requested permission to announce classes and promised to continue recruitment. Decision to operate the class would be delayed until (6.3.2.3) or (6.3.3.4) revealed enrollment. From (4.7) to (5.1.1) The students identified in (4.7) are referred to learning locations of their choice. The recruiter is asked to be present, if possible, when the client arrives.

5.1 Interview Client. The informal interview of the new student was to make him feel comfortable in the learning environment and to enable the teacher to become acquainted with the student.

(5.1.l) Welcome To Center/Classroom. The student is welcomed to learning center situation.

(5.1.2) Fill Out Personal Data Sheet. Students fill out GSMCS Personal Data Sheet which includes name, address, phone number, work history, educational background.

(5.1.3) Determine Educational Level. Both students being interviewed say they have completed grade 9 in public school.

(5.1.4) Determine Referral Source. This is useful to GSMCS in determining the effectiveness of the (4.0) subsystem. It is learned that both students heard about the ABE program from public service announcements on the local radio station (4.4.2).

(5.1.5) Determine Personal Goals. One student desires to improve his educational level to get a better job. The other desires to increase his educational level with his wife, who is currently working for a master's degree in elementary education.

5.2 Introduce To Center/Classroom. Learners are given a general tour of learning center facilities. They are briefed on the purposes of materials (5.2.1) as they relate to the educational (5.1.3) and personal (5.1.5) goals of each student; and the location of (5.2.2) and uses for materials (5.2.3).

To make the learners feel more at ease, they are also introduced to several students (5.2.4) in the learning center. Approximately 15 minutes is consumed in this tour.

6.0 PLAN AND CONDUCT PROGRAM

6.1 Test Client. In order to accurately determine the educational level of each student for (6.3), it is necessary he be tested.

(6.1.1) Explain Purpose Of Testing. Because many students become apprehensive at the thought of receiving a "grade" on the first day at the learning center, it was explained that the purpose of testing was merely to place him with materials appropriate to educational and personal goals.

(6.1.2) Administer Formal Test

(6.1.2.1) Administer Standardized Test. Each student was given tests from Adult Basic Education Level D of the California Test Bureau.

(6.1.2.2) Administer Publisher's Test. This function was bypassed.

(6.1.3) Score And Analyze Tests. Tests of each student were scored. It was found that Student #1 (desiring a better job) was a Level 1 learner as he read at 3.2 grade level. Student #2 had 8.0 reading level.

6.2 Identify Client Immediate Educational Needs. Because of low reading ability, Student #1 needed to satisfy literacy needs (6.2.4). In doing this, he would also fulfill (6.2.2) Satisfy Job Requirements and (6.2.3) Improve Self. Student #2 was at a fairly high reading level, and it was decided that his immediate educational needs should be to improve himself (6.2.3) and to achieve the GED (6.2.1).

6.3 Develop Individual Plan Of Study

(6.3.1) Create Plan. It is essential that a course of study be instituted that will meet the individual student goals and needs, and that the student participated in its development.

(6.3.1.1) Select Level Of Instruction. It has been determined that Student #1 is a Level I learner, while Student #2 is a Level III learner.

(6.3.1.2) Identify Individual Learning Objectives. Appropriate materials from the (6.5.1) subsystem are selected for each student. These materials are to cover the general areas of reading, mathematics, and English grammar. Student #1 is to work on the following: (a) *I Want to Read and Write* by Smith and Wilbert (Steck-Vaughn Company) in 36 sessions at the learning center. (b) *Programmed Math* by Sullivan (McGraw-Hill Book Company) Books 1-7, (c) *English Lessons for Adults* by Varnado and Gearing, Books 1-3, and (d) Use Controlled Reader (reading machine by EDL). Student #2 is to work in the following: (a) *English 2200* by Blumenthal (Harcourt, Brace & World), (b) *Basic Essentials of Mathematics*, Books 1 & 2 (Cambridge Book Company, Inc.)

(6.3.7) Select Most Feasible Location. It is believed this function is not performed in this fashion and should be eliminated from the flow chart model. Each student makes his choice of learning location usually based on proximity.

(6.3.2) Conduct Center Instruction

(6.3.2.1) Select Learning Laboratory. During the interview (5.1.2) it is determined that both students live in close proximity to Learning Center #1, and it is the most feasible location for their study.

(6.3.2.2) Select Hardware/Software. The materials chosen are found to be readily available due to prior issuing (6.4.2.4).

(6.3.2.3) Produce Client Learning Sequence. The order in which materials are described in (6.3.1.2) is the normal learning sequence for each session. No set schedule of study for each subject area is rigidly imposed, provided students work with all assigned materials at each learning session.

(6.3.4) Formulate Learning Psychology. The undergirding primary psychological bases selected from (6.3.2.2) and (6.3.3.2) are:

(6.3.4.1.1) Activity
(6.3.4.1.3) Reinforcement
(6.3.4.1.4) Generalization
(6.3.4.1.6) Knowledge of Results
(6.3.4.2.3) Understanding
(6.3.4.2.4) Feedback
(6.3.4.2.5) Goal-setting
(6.3.4.3.1) Abilities
(6.3.4.3.2) Social Development
(6.3.4.3.3) Anxiety Level
(6.3.4.3.5) Cultural Environment

(6.3.2.4) Instruct And Test. Both students #1 and #2 began work in the appropriate materials. Each is periodically tested in each subject area to ascertain the extent of progress.

(6.3.2.5) Monitor And Evaluate Progress. The progress of each student is monitored both by the testing (6.3.2.4) and by informal, personal observation by the instructor; a cumulative file is maintained for each student. Student #1 was making adequate progress in all materials. However, Student #2 did not like the *Basic Essentials of Mathematics*, Book 1, selected in (6.3.1.2) and was doing poorly. This evaluating resulted in feedback to the (6.3.2.2) subsystem. In order to meet the educational needs of Student #2, it was decided in (6.3.2.2) to have him work with math tapes on the didactor machine (Didactics Corporation). After placing Student #2 with this material and all functions of (6.3.2) Conduct Center Instruction subsystem were performed, it was found that he made satisfactory progress.

(6.3.6) Counsel Client. While Students #1 and #2 were operating in subsystem (6.3.2.4) Instruct and Test, they received periodic counseling by the instructor. He did not attempt to pry into the personal homelife of each student, but rather counseled regarding problems hindering progress with the educational materials. Student #1 felt very embarrassed because he could not read as well as his co-workers, and was considering dropping out of the program before they discovered that he was attending. The instructor explained to Student #1 that his attendance would be kept confidential and the best way to overcome embarrassment was to continue his reading study at the learning center.

It should be noted that a student desiring to attend adult education night classes follows a path through (5.0) Apply Enrollment Procedure, (6.1) Test Client, (6.2) Identify Client Immediate Educational Needs,

(6.3.l) Create Plan, and (6.3.7) Select Most Feasible Location, the same as for the learning center student. Even though many night class students have been previously tested (6.l) and are continuing students, it would be very difficult for the night teacher to test all new students the first night of class. Therefore, beginning dates for night classes were staggered so the coordinator or one of the two assistant coordinators could help with testing and enrollment.

(6.3.3) Conduct Classroom Instruction. Instruction in the classroom and in the learning center (6.3.2) is similar. However, the night class teacher will occasionally present special speakers and discussions on relevant topics. For these, the teacher will (6.3.3.1) Develop A Course Outline To Teaching Point Level, (6.3.3.2) Prepare A Lesson Plan, (6.3.3.3) Select Appropriate Instructional Materials, which are obtained from (6.4.2.4), and (6.3.3.4) Instruct. While developing the course outline (6.3.3.1), he will (6.3.6) Establish Test Criteria. Classroom instruction (6.3.3.4) is accompanied by test acquisition (6.3.5), test administration (6.3.3.5), and evaluation of clients in (6.3.3.6). As in the learning center, the classroom teacher will also periodically counsel with students (6.3.8).

At the present time, night classes are not yet completely operable. Therefore, a student example cannot be used in discussing the classroom procedures. However, no problems are anticipated with (6.3.3) at this point.

Before, during, and after an instructional unit (6.3.3.4) the teacher will evaluate client progress through use of the testing program in (6.3.3.5). These results will be used to counsel the client as well as to prepare a modified lesson plan through data feedback from (6.3.3.6) to (6.3.3.2).

(6.3.5) Prepare Testing Schedule. The teacher will use the criteria from (6.3.6) to produce, select, and acquire appropriate tests.

(6.3.5.1) Produce Written Test Schedule. The instructor produces a testing schedule consisting of teacher-made tests (i.e., true - false) or published tests (i.e., Sullivan Reading Test).

(6.3.5.2) Produce Oral Test Schedule. While the majority of oral tests are often spontaneously administered, their effectiveness is determined by the degree of preparation. They will be used in informally evaluating understanding and achievement, and are vital to learning English as a second language.

(6.3.5.3) Produce Performance Test Schedule. This system is bypassed until January since there are not activities requiring performance tests. The consumer education course scheduled for February will require activity in stores, offices, and businesses. At that point, performance testing will be critical.

Important Relationships (6.0)

From (6.1.3) to (6.2.3)

From (6.1.3) to (6.3.1.1) To accurately identify the clients' immediate educational needs (6.2), it is imperative that test results be thoroughly analyzed (6.1.3). Since individual instruction is of high priority in ABE, the learning plan created for each student (6.3.1) must reflect his immediate educational needs (6.2).

From (6.5.3) to (6.4.1.1)

From (6.5.3) to (6.4.3.1) To insure that every teacher has adequate materials readily available, an easily accessible storehouse and inventory of materials will be maintained following procurement decisions made in (6.5.3).

From (6.4.2.4) to (6.3.2.4)

From (6.4.2.4) to (6.3.3.4) These signal paths are essential for maintaining an adequate supply of materials to each ABE student. The assistant coordinator is responsible for the functions within (6.0).

From (3.7) forward to (6.5.1) The program management objectives (3.7) serve as guidelines to determine the types of materials to be identified and obtained in (6.5.1). Materials having a relationship to these objectives will be sought using the techniques previously identified.

From (6.3.1.3) forward to (9.1.1.2)

From (6.3.1.2) forward to (9.1.1.3) Learning objectives from (6.3.1.2) and the degree to which they are met by learners are evaluated in (9.1.1.2) and (9.1.1.3) subsystems. Learning centers lend themselves, because of programed materials, to empirical evaluation.

From (6.3.8) forward to (9.1.1) Every effort is made to insure goal-centered counseling. The main criterion of counseling success is through a follow-up study of subsequent student activity which will be needed in the second simulation cycle and faculty requirements will be adjusted accordingly.

From (9.1.1) to (6.3.2.3)

From (9.1.1) to (6.3.3.1) The data acquired in internal evaluation (9.1.1) are vital to adapting the learning activities and are fed back. They will enable future planning in the second simulation and cycle direct teachers and planners after (9.1.1) is made operable at mid-year.

7.0 RECRUIT AND SELECT FACULTY

The original plan was to employ 54 faculty members for program initiation. Following resubmission of local plan (1.3.3) to (1.2.5), it was decided to

employ faculty only when they registered 12 students, or if their past performance indicated a successful enrollment pattern. All potential faculty were notified of new policy and its cause and asked to participate in (4.0).

7.1 Decide Number Of Teachers Needed. No firm decision was made but 21 volunteers in (4.0) were tentatively selected in (7.1).

7.2 Decide Number Of Paraprofessionals Needed. It was decided to staff two learning centers with paraprofessionals. 3 were hired and assigned in (7.8) to Learning Centers #1 and #2. All were assigned in (7.8.2) to on-the-job training as the result of (8.2.5).

7.3 Advertise Personnel Needs. A general announcement to all faculty in GSMCS was made by the Superintendent of Schools at the August 24 meeting.

7.4 Establish Teacher/Paraprofessional Selection Criteria

(7.4.1) Identify Academic Requirements. Certification requirements identified in (1.2.3) were used. Paraprofessionals require a GED certificate or high school diploma.[7]

(7.4.2) Identify experience requirements. Paraprofessionals could not operate a learning center unless they have two years of experience. A faculty member with a BS degree but without previous experience in adult education would enter a training program: (7.4.2) to (7.7), to (7.8.2) to (8.1).

(7.4.3) Identify Personality Characteristics. These were not identified at GSMCS and requests from other programs in Georgia did not produce any fruitful data. It was decided to refer this to (2.3.4) for further study. Coordinator contacted a consultant (3.3) who supplied a check list used in North Carolina as a temporary evaluative criterion.

7.5 Screen Candidates For Interview. Respondents to announcement (7.3) were told previously in (2.3.4) of decision to pay teachers only when ADA quota was met. 10 of 51 candidates did not seek employment in this program.

7.6 Interview Candidates. 41 remaining candidates were interviewed using (7.4) criteria.

7.7 Accept/Reject Candidates. 6 candidates from (7.6) were de-selected: 1 based on (7.4.1) criteria; 5 because of undesirable characteristics in (7.4.3). De-selection data were fed back to (7.9) for criteria modification.[8]

7.8 Assign Faculty. According to individual experience, personal teaching preference, and program needs, the faculty accepted in (7.7) were assigned. Assignment in (7.8.1) also calls for performance of (4.0).

(7.8.2) Assign To Training Program. Teachers were assigned to a training program according to these criteria:

a. Prior experience in program
b. Type of current teaching assignment
c. Experience gained in 4.8.

Paraprofessionals were assigned directly to (8.4) based on a decision in (8.2.5) since they were placed in learning centers.

Important Relationships (7.0)

From (7.4) to (9.1.3.1) Selection criteria from (7.4) will be fed forward to evaluate staff in (9.1.3.1).

From (3.7) to (7.1)

From (3.7) to (7.2) The program management objectives (3.7) are the numerical determinants necessary to direct and quantify (7.1) and (7.2).

From (8.5) back to (7.9) Performance data resulting from evaluation of the training program (8.5) is fed back to (7.9) and then to (7.4) for modification of selection criteria.

In GSMCS, reading teachers are not assumed capable of teaching adults simply because of previous experience. This feedback changes several criteria in (7.4.3).

8.0 TRAIN FACULTY

Faculty training takes place at two levels, one for beginning faculty and the other for experienced members. Data on GSMCS training requirements are fed forward from (2.3.4) and (3.7) and also obtained from (4.8), (6.5.3), and (6.3.1).

8.1 Establish Learning Objectives. Five objectives were identified:

a. Learn about GSMCS and ABE (new faculty)
b. Learn program promotion procedures
c. Learn use of hardware (6.4.3) and software (6.4.2)
d. Learn center operational procedures
e. Learn supervisory techniques

To accomplish these objectives, the following activities were planned:

a. Provide orientation for new teachers to acquaint them with the purposes and goals of program, September 1, 1972.
b. Expose teachers to three techniques used in client recruitment and demonstrate understanding by employing them in 25 contacts.
c. Develop expertise in use of materials evaluation by utilizing criteria on materials in use.
d. Develop expertise in planning and operating centers through hands-on experience.
e. Develop professional supervision as it applies to center management.

8.2 Determine Inservice Training. It was decided that objectives would be met through the following type of inservice training:

a. Graduate course (8.2.0)
b. Orientation seminar (8.2.2)
c. Program promotion procedures seminar (8.2.2)
d. Material evaluation seminar (8.2.2)
e. On-the-job training (8.2.5)

8.3 Select Training Staff. The training staff selected to enable (8.2) was organized as follows:

a. College consultant (8.3.1) and GSMCS coordinator for (8.2.2)
b. College consultant (8.3.1) and local newsman for (8.2.2)
c. College consultant (8.3.1) and West Georgia College and Morehead State University for (8.2.1)
d. Local learning center directors (8.3.4) for (8.2.5)
e. College consultant (8.3.1) for (8.2.2)

8.4 Conduct Training Program. The training staff (8.3) and coordinator met in early August to plan the inservice training decided in (8.2). Faculty were assigned to training in (7.8.2):

a. 3 paraprofessionals to (8.2.5) in Centers #1 and #2
b. 15 new faculty to Orientation Seminar (8.2.2) on September 3, 1972
c. All faculty to Program Promotion Procedures Seminar (8.2.2) on August 21, 1972
d. All faculty to Material Evaluation Seminar on November 10 and 11, 1972
e. 17 faculty to college course in January, 1972, determined by participation in prerequisite course conducted in January 1971.

Following the orientation seminar in (8.4) all teachers assigned to teaching (7.8.1) began enrollment procedure (5.1.1). The program promotion procedures seminar (8.4) was canceled due to instructor illness and re-scheduled for December 1972. In (8.2) must develop an alternate solution to avoid a recurrence in future cycles.

8.5 Evaluate Program. The degree to which the learning objectives in (8.1) were met by the participants in the orientation seminar was determined by a post-training evaluation form. Analysis revealed the need for a better understanding of adult learning psychology. This information was fed back to (8.2) and (8.3) to affect the next cycle in March 1973.

Low performance levels in recruiting clients were debilitating according to feedback from (4.8). Training should be continuous throughout the year and scheduled at an earlier date to avoid failure. The coordinator will reorganize (8.0) to provide for second cycle training.

The on-the-job training for paraprofessionals was considered good by the trainees although they wished more training in matching materials to learners. The coordinator decided to include this aspect in a subsequent seminar planned for December 3 and 4.

Important Relationships (8.0)

From (8.5) back to (7.9) Program evaluation data will require, based upon performance and training needs, criteria modifications in selection (7.9). An example: academic requirements for certification.

From (2.3.4) to (8.1) Faculty requirements established in (2.3.4) will have an influence upon training objectives.

9.0 CONDUCT TERMINAL EVALUATION

While this subsystem is not fully operational in GSMCS in this simulation cycle, some information is available to reveal its operational pattern. This subsystem is important because it provides feedback for modifications of other subsystems in future cycles. The staff and faculty have examined (9.0) and implementation is planned for June 1973.

9.1 Conduct Internal Evaluation. Much of the data to facilitate external evaluation (9.2) must be acquired by internal evaluation. This in-house evaluation is terminal, primarily because of continuous evaluation decisions being made in previous subsystems. Of all the (9.0) subsystems, (9.1) provides the maximum output.

(9.1.1) Evaluate Learners. All clients in GSMCS will be interviewed and evaluated (9.1.1.1.) to determine program effectiveness in terms of objectives and needs achievement identified in (3.7), (6.2) and (6.3.1.2). A few learners will be interviewed by a four-man team to determine their perception of the program's ability to meet (6.2) needs. Essential to evaluation in (9.1.1.2) is analysis of academic achievement by testing the learner in (6.3.2.5) and (6.3.3.6). Test data enable examining scores of subject-matter tests. Achievement test data (9.1.1.3) will also be analyzed along with GED performance (9.1.1.4). Failure in GED will identify learning problems requiring changes in future planning. All information outputs to external evaluation (9.2) and to teacher evaluation (9.1.2).

(9.1.2) Evaluate Teachers. The subsystems within (9.1.2) have been accepted by the faculty as standards of effectiveness. In (9.1.2.1) the staff determines how well the faculty were able to perform promotion (9.0), enrollment (4.0), testing (6.1), teaching (6.3.2), and (6.3.3) tasks, in addition to measuring how they met requirements established in (2.3.4). Data from (9.1.1) inputs to (9.1.2.2) to enable evaluation of faculty based purely on learner achievement.

A Likert-type evaluation scale of eight items will be used to evaluate teacher trainee performance in (8.5) and input to (9.1.2.3). The ability of faculty to retain students (9.1.2.4) will be evaluated by comparing the number of students recruited in (4.8) with the number of students completing in (6.3.8). Since students can enter the program at any time, ADA data serves as another evaluation; all teachers agreed to maintain 12 ADA. Faculty with a poor retention factor might have an adequate ADA. Faculty should be able to successfully meet one of these criteria.

(9.1.3) Evaluate Staff. A team of six teachers selected by the coordinator will evaluate staff. By using a staff evaluation form, three criteria have been agreed upon by staff and faculty. Criteria for performance of administrative and supervisory staff (9.1.3.1) have been identified and fed forward from (3.7). Resources (9.1.3.2) previously identified in (2.3.2) will be evaluated by examining performance in (4.8); number of student referrals (4.7); and number of contacts (4.4), (4.5) and (4.6). (9.1.3.2) data must be fed back to (2.5) to enable planning for the next cycle. Recruitment and retention of clients (9.1.3.3) data are compared with objectives from (3.7). The consistency of this performance is most important since recruitment and retention represent a critical part of the program. All data from internal evaluation (9.1) inputs external team evaluation (9.2.1) and analysis of the internal evaluation (9.3.1).

9.2 Conduct External Evaluation. Evaluation of program effectiveness by an outside source is an essential ingredient of the total evaluation process. A team of outside evaluators is identified; they will make at least two periodic visits prior to producing a terminal evaluation. The team will be composed of a consultant from the state staff (9.2.1.1); two clients (9.2.1.2); three representatives from (4.5) groups and the GSMCS Advisory Committee constituting (9.2.1.3); and a college consultant (9.2.1.4). This team will apply the terminal evaluation form which was an adaptation by participants at the West Georgia College 1972 Summer Institute of a form submitted by the Department of Adult Education at University of Georgia in Athens. This report inputs (9.3.2).

9.3 Prepare Terminal Report. This subsystem is both a beginning and an end. It ends the analysis of program effectiveness in the first simulation cycle and produces feedback to modify the model in preparation for the second simulation cycle.

The data from internal evaluation (9.1) and external evaluation (9.2) form the basis for the preparation of the report (9.3.3) by the coordinator who will circulate it (9.3.4) to outside evaluators (9.2.1), state department officials (1.2.3) and local superintendents of schools (1.3.4). It should also be available to groups in (3.7), (4.4), and (4.5).

Important Relationships (9.0)

From (3.7) to (9.1.1.1)

From (3.7) to (9.1.3.1)

From (3.7) to (9.1.3.3) Perhaps these are the three most important signal paths in the entire system since evaluation determines how well program management objectives (3.7) have been met at the end of the program cycle.

From (9.1.1) back to (6.3.2.3)

From (9.1.1) back to (6.3.3.2) Data from internal learner evaluation is fed back to adjust or modify instruction at those two critical subsystems.

From (9.1.2) back to (2.5) Information fed back from internal evaluation of faculty will enable modification of parameter values in (2.5) having a direct bearing on subsequent subsystems in the next cycle.

From (9.1.2.3) back to (8.1)

From (8.5) to (9.1.2.3) Evaluation of training by staff and faculty will determine the achievability of learning objectives in (9.1.2.3) and feed back information to (8.1) to restructure the learning objectives and programs. Additionally, (8.5) will feed forward the data needed to evaluate faculty training in terms of (8.1) objectives.

THE PERTINENT AND IMPERTINENT

1. While this planning model was developed for the State of Georgia, its universality is such as to make it viable for any state. The major task will be in the adaption of the model to suit an individual state's program needs. Most of the adaptions will come in the first subsystem, since that is the level where state plans are differently developed. In fact, the first edition of this model indicated that the state plan was developed entirely at the state level and filtered downward to local programs. The revised edition of the model as published here indicates that the state plan is developed locally and filtered upward.

2. Because the model serves as a planning process for both state department and local planners, it would seem useful for the state staff to take the leadership in providing training. In Georgia this can be done through the inservice process and in regional seminars. The state staff can be trained in its use and they can then provide subsequent training at the local levels.

3. The real goal of the model is the development of written narratives similar to the sample one included in this publication. "Talking through" the model is helpful, but development of the narrative in written form will enable comparison, evaluation, and predictive decision making. Perhaps the best way to evaluate a prepared narrative is to ask the question: Can a person who does not know anything about the local program develop a working knowledge by reading the narrative?

4. The user of the model must remember that he must describe in his narrative such factors as who will be responsible to see that functions are performed, when they will be performed, and where they will be performed. Above all, any planner must delegate certain responsibilities, and this model provides a systematic and measurable process for such assignments.

5. The model requires constant evaluation and as such is also a specific decision-making process. It is task centered, and each task is related to others. Perhaps one of its most outstanding assets is the degree of specificity it brings to the planning process, an asset not readily available in other planning processes for adult educators.

6. The use of the point numeric code technique has the advantage of indicating a planning sequence as well as setting up standards by which the data can be transferred quickly into a computer-based operation.

7. While all subsystems are interrelated, any one of the nine subsystems can be used separately. If a planner wants to develop a good promotional program, he can isolate the proper subsystem and use it to direct this functional requirement.

8. The one factor reviewed many times throughout the entire discussion was cycling. The planner must use the model continously and not resort to "one-time" usage. Because no planner will have used this model, preparing the first cycle simulation will require much more time than following cycles.

9. A question that arises from users during training warrants inclusion at this time. "Suppose," they ask, "that the model has left out something, or that we don't operate our program in quite the same fashion? What do we do then?" The answer to that question is simple: Change it.

10. Although the model has a fixed sequence which is identified by a numeric code, the user should not interpret this sequence to be an absolutely fixed. Many functions can be dealt with simultaneously and in separate groups. Synthesizing these efforts is, however, the responsibility of the planner.

11. The model is a data storage instrument. Because some functions are highly interrelated the same data will be stored in several places.

12. The model is compatible with other systems approaches. The use of the management-by-objectives, PERT, and PPBS, techniques is not restricted by the use of the model. Information acquired or used through those techniques is enhanced by the model which supplies decision points, data storage localities, and description of functions.

13. The next four paragraphs are dedicated to those readers who like to have a concise summary.

This paper has described a specific process involving analysis, synthesis, modeling, and simulation. The model can be used by administrators, teachers, and supervisors to meet program planning goals. It stressed the viability of anasythesis as a main tool in educational engineering. While the model was developed for one specific geographic region, its applicability to large and small programs, and exhaustive detail for developing individual plans of study for adult learners will make it useful for planners in many parts of the country.

The model was designed to avoid the short-range, crisis-centered approach to planning all too often employed by planners operating in the educational arena. It was a response to LaForest's (1971) contention that the major malfunction in educational programs and experiences is due to poor management in teaching, administration, and planning.

The use of a scenario selected from real life to provide a first simulation cycle indicates that the model has a 95% correlation with reality.

In conclusion, the use of anasynthesis is advocated to relate cost to product, to identify relationships which reveal factors affecting input and output process, and to organize planning functions into a form readily understood by skilled and unskilled practitioners alike.

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FOOTNOTES

1. This paper does not intend to develop an exhaustive discussion on educational engineering but will advocate an approach that seems more global.

2. "Planning in its broadest sense means any form of rational anticipation of and preparation for future action." Philip P. Green, Jr., *An Introduction to County Planning* (Chapel Hill: Institute of Government, The University of North Carolina, 1968, p. 2)

"Planning is used there in a broad sense to encompass a rational means-ends assessment of resources and objectives by all interested persons, although some cynics contend that in education, there are only means, no ends." Harry J. Hartley, *Educational Planning-Programing-Budgeting: A Systems Approach* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968, p. 2)

3. While adult basic education (ABE) has various descriptions, that used by the Adult Education Act of 1966 (Title III) is universal: "Adult basic education means education for adults whose inability to speak, read, or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability which is designed to help eliminate such inability and raise the level of education of such individuals with a view to making them less likely to become dependent on others, to improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment, and to making them better able to meet their adult responsibilities."

4. ABE coordinator reports directly to Superintendent of Schools and assumes full responsibility for organization and supervisory functions.

5. These signal paths were added by GSCMS.

6. Local programs are remunerated upon the basis of the average daily attendance (ADA) and a designated target population.

7. One had achieved a GED certificate in the program during 1972.

8. One candidate did not wish to work with people of low IQ scores.